Pioneer sound.vision.soul

Service Manual

ORDER NO.
RRV3131

DVD RECORDER

PRV-LX1DW

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	PRV-LX1DW		
KU/CA	○	AC120V	

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
PRV-LX1/KU/CA	RRV2803	

● How to distinguish the PRV-LX1DW/KU/CA from the PRV-LX1/KU/CA.

PRV-LX1/KU/CA	&&&&0######&&
PRV-LX1DW/KU/CA	&&&&**1**######&&

&: Alphabet, #: Figure

The sixth digit of the serial number for the PRV-LX1DW is " **1** ", whereas that for the PRV-LX1 is 0.

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
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T – ZZY APR. 2005 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 → R50 ..... RN2H R 5 0 K
1 → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ CONTRAST TABLE

PRV-LX1DW/KU/CA and PRV-LX1/KU/CA are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.				Remarks
			PRV-LX1/ KU/CA		PRV-LX1DW/ KU/CA		
		PACKING SECTION					
P15 - 7		Operating Instructions (English/ French)	DRC1228 or DRC1258		DRC1258		
P15 -16		Packing Case	DHG2346		DHG2458		
		REAR PANEL SECTION					
P23 - 4		Rear Panel	DNC1696		DNC1709		
			[Drive 1]	[Drive 2] (option)	[Drive 1]	[Drive 2]	
		EXTERIOR SECTION (2/3)					
P19 - 6		Drive Assy LX1	DXX2532	-	DXX2532	DXX2532	No.1
P19 - 11		Silicone Spacer A	DEB1600	-	DEB1600	DEB1600	No.2
P19 - 12		Heat Sink	DNG1087	-	DNG1087	DNG1087	No.3
P19 - 35		Screw	BBZ30P060FMC	-	BBZ30P060FMC	BBZ30P060FMC	No.4
P19 - 36		Screw	AMZ30P060FZK	-	AMZ30P060FZK	AMZ30P060FZK	No.5
		FRONT PANEL SECTION					
P25 - 14	NSP	Tray Filter	DEC2528	-	DEC2528	DEC2528	No.6
P25 - 15		Tray Holder	DNV1038	-	DNV1038	DNV1038	No.7
P25 - 16		Tray Spring	DBH1515	-	DBH1515	DBH1515	No.8
P25 - 17		Drive 2 Blind Panel	DNV1040	-	Not used	Not used	
P25 - 21		Drive Lens	DNV1039	-	DNV1039	DNV1039	No.9
P25 - 13	NSP	Tray Panel 1	DNV1037	-	DNV1037	Not used	
	NSP	Tray Panel 2	Not used	-	Not used	DNV1044	No.10
		Tray Button 2	Not used	-	Not used	DAC2110	No.11
		Drive Lens Support Plate	Not used	-	Not used	DEC2536	No.12
		Drive 2 Panel	Not used	-	Not used	DNV1045	No.13
		Tray Panel 1 Assy	DXA1961	-	DXA1961	Not used	
		Tray Panel 2 Assy	Not used	-	Not used	DXA1962	No.14
		Screw	VBA1034		VBA1034	VBA1034	No.15
		Screw	Not used	-	Not used	BPZ20P060FZK	No.16

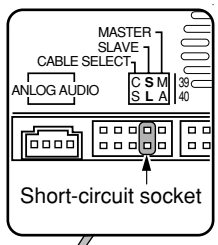
Note : The numbers in the remarks column correspond to the numbers on the " EXPLODED VIEWS ".

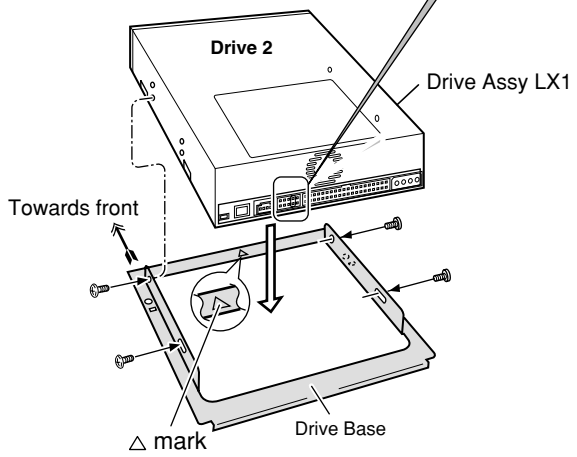
■ EXPLODED VIEWS

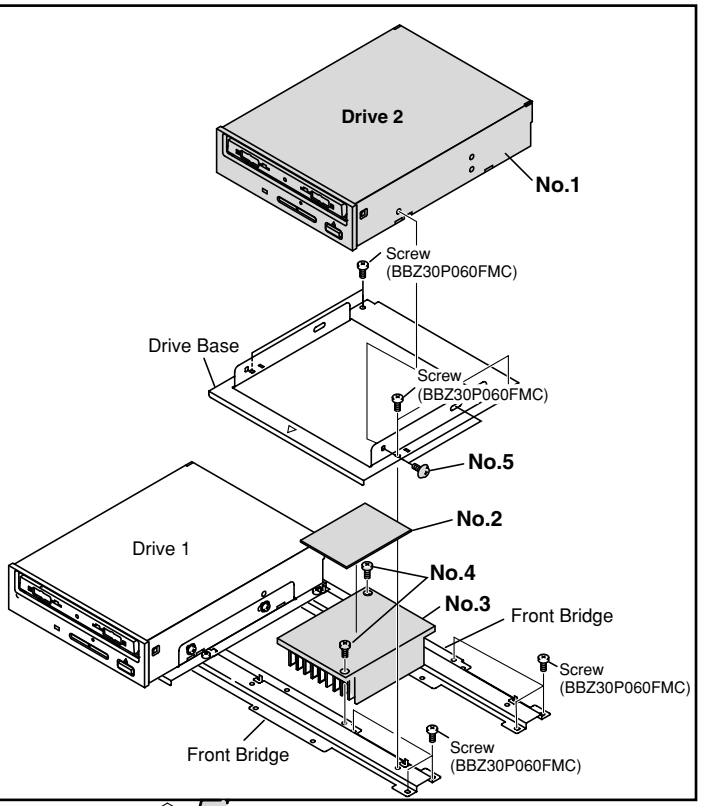
• EXTERIOR SECTION and FRONT SECTION (DRIVE 2 SECTION)

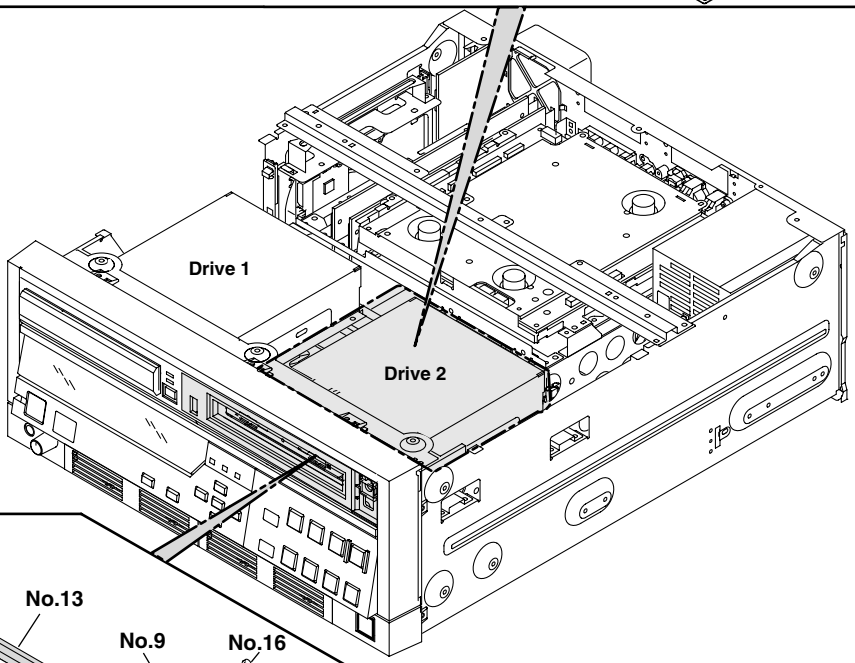
• Drive 2 Section

Note:
When replacing Drive Assy LX1 with one for servicing in a case where the DVD-R/RW writer unit on the drive-2 side is in failure, be sure to attach the short-circuiting socket to the device configuration jumper Pin 2, located inside the rear panel.

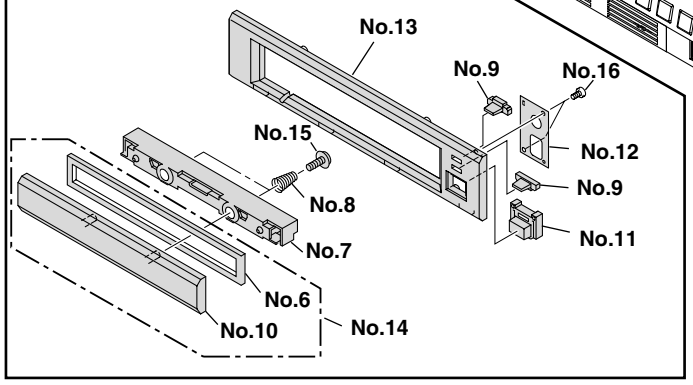




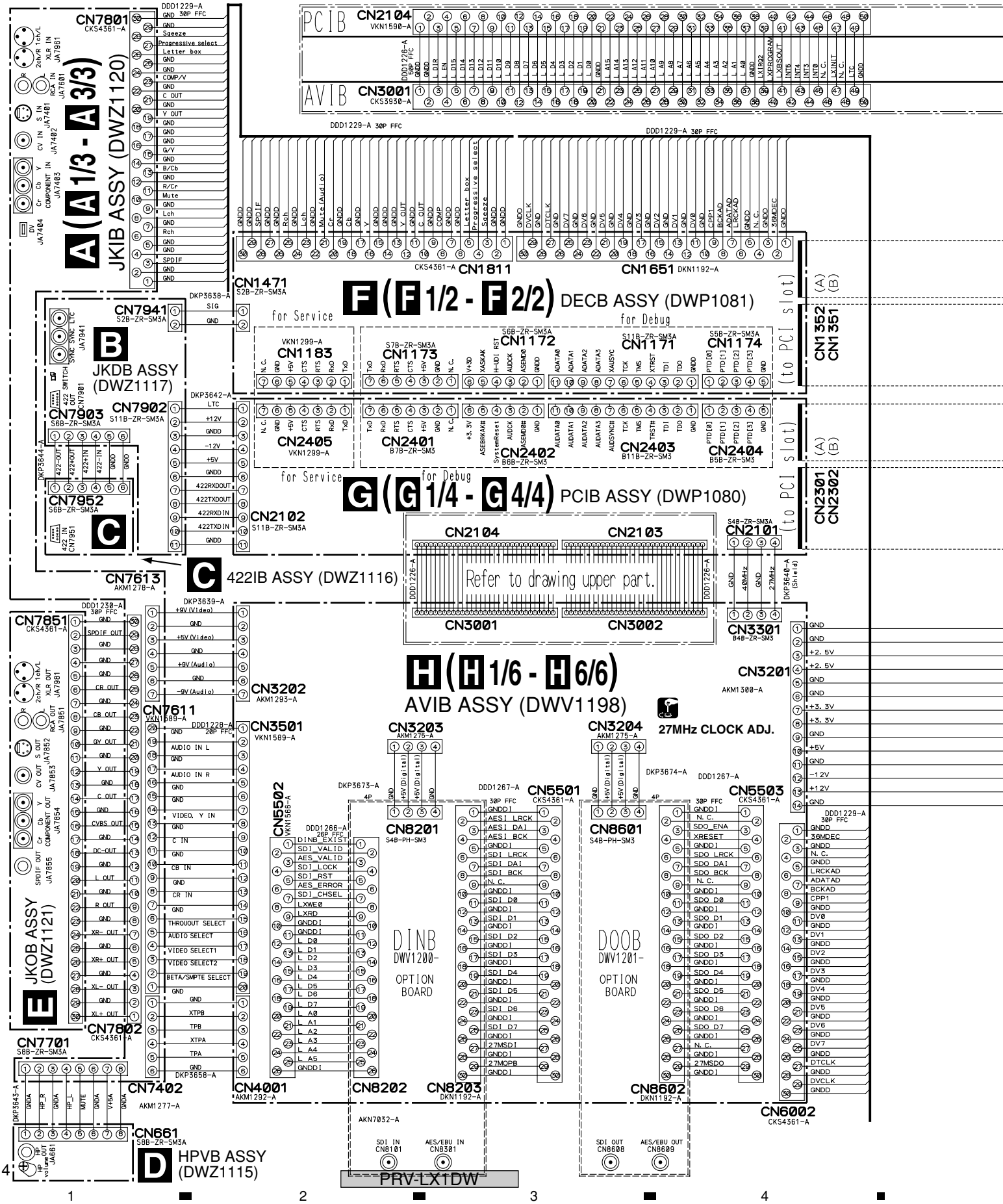


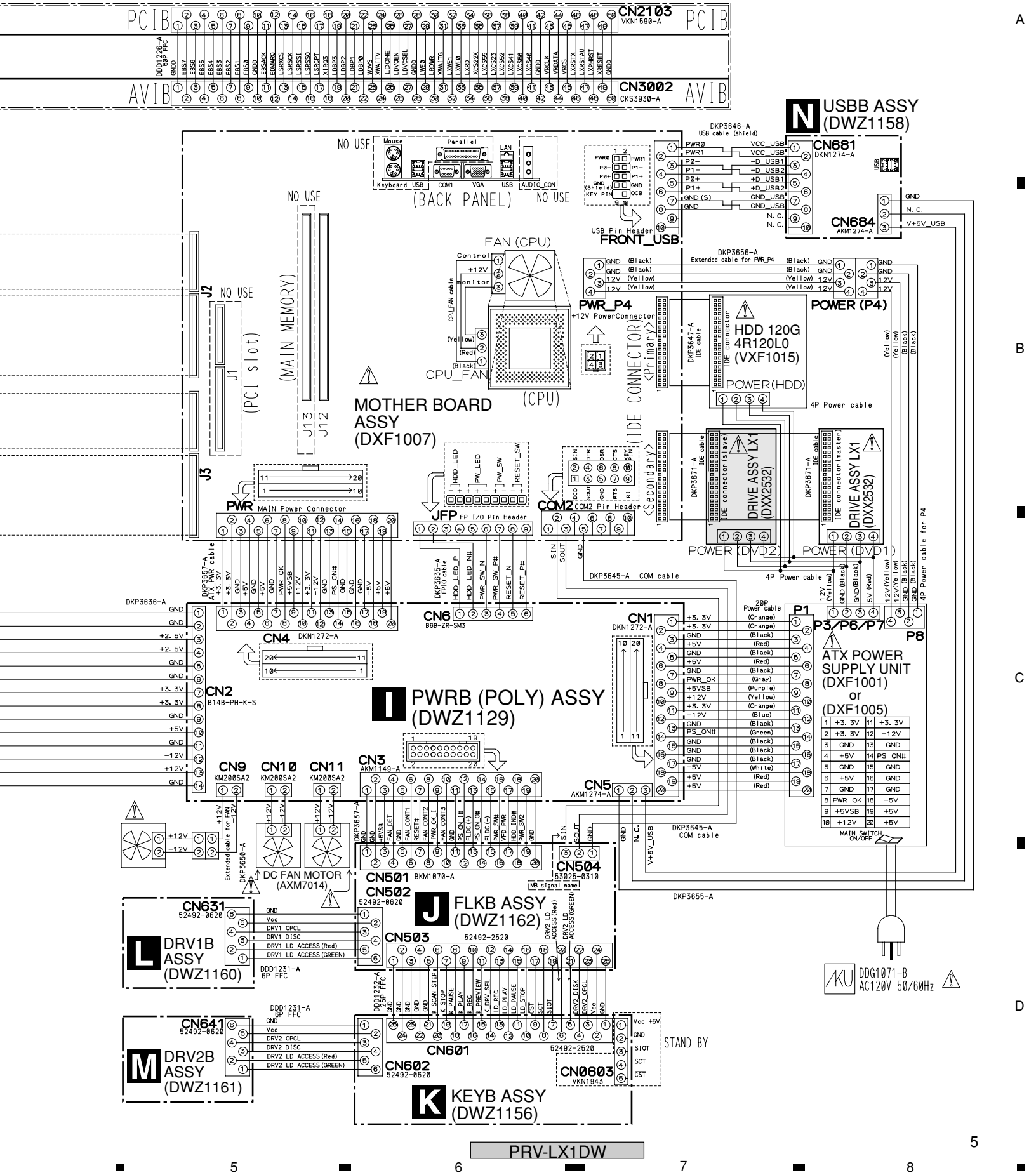


• Drive 2 Front Section



2. OVERALL WIRING DIAGRAM


A (A 1/3 - A 3/3) JKIB ASSY (DWZ1120)
B JKDB ASSY (DWZ1117)
C 422IB ASSY (DWZ1116)
D HPVB ASSY (DWZ1115)
E JKOB ASSY (DWZ1121)
F (F 1/2 - F 2/2) DECB ASSY (DWP1081)
G (G 1/4 - G 4/4) PCIB ASSY (DWP1080)
H (H 1/6 - H 6/6) AVIB ASSY (DWV1198)
DINB DWV1200- OPTION BOARD
DOOB DWV1201- OPTION BOARD
27MHz CLOCK ADJ.
Refer to drawing upper part.
PRV-LX1DW


PCIB
CN2103
VKN1590-A
AVIB
CN3002
CKS3930-A
N USBB ASSY (DWZ1158)
CN681
DKN1274-A
CN684
AKM1274-A
FRONT_USB
USB Pin Header
NO USE
(BACK PANEL)
Mouse
Parallel
LAN
Keyboard
USB
COM1
VGA
AUDIO_CON
FAN (CPU)
CPU_FAN
(CPU)
MOTHER BOARD ASSY (DXF1007)
(MAIN MEMORY)
(PCI slot)
J1
J2
J3
J12
J13
PWR_P4
+12V PowerConnector
POWER (P4)
HDD 120G 4R120L0 (VXF1015)
POWER(HDD)
(IDE CONNECTOR)
<Primary>
<Secondary>
DRIVE ASSY LX1 (DXX2532)
POWER (DVD2)
POWER (DVD1)
PWR MAIN Power Connector
JFP FP I/O Pin Header
COM2 COM2 Pin Header
CN6
CN4 DKN1272-A
CN2
CN1 DKN1272-A
CN5 AKM1274-A
P1
P3/P6/P7
P8
ATX POWER SUPPLY UNIT (DXF1001) or (DXF1005)
I PWRB (POLY) ASSY (DWZ1129)
CN9 KM200SA2
CN10 KM200SA2
CN11 KM200SA2
CN3 AKM1149-A
DC FAN MOTOR (AXM7014)
CN501 BKM1070-A
CN502 52492-0620
CN504 53025-0310
J FLKB ASSY (DWZ1162)
CN503 52492-2520
L DRV1B ASSY (DWZ1160)
CN631 52492-0620
M DRV2B ASSY (DWZ1161)
CN641 52492-0620
CN601 52492-2520
CN602 52492-0620
CN0603 VKN1943
K KEYB ASSY (DWZ1156)
STAND BY
/KU DDG1071-B AC120V 50/60Hz
DKP3636-A
DKP3645-A COM cable
DKP3655-A
DKP3656-A Extended cable for PWR_P4
DKP3646-A USB cable (shield)
4P Power cable
20P Power cable
MAIN SWITCH ON/OFF

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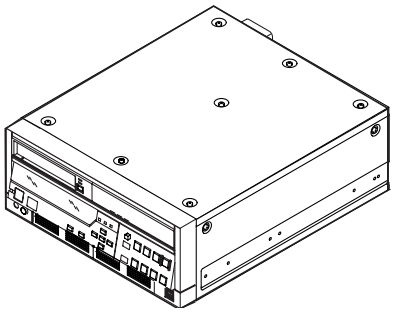
Service Manual



PRV-LX1

ORDER NO.
RRV2803

DVD RECORDER

PRV-LX1

DVD-R/RW WRITER UINT

PRA-DW11

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PRV-LX1	KU/CA	AC120V	
PRA-DW11	ZUCYV/WL	DC Power supply from other system	

• Before returning the repaired product to the user, be sure to upgrade the firmware to its latest version.

For details, refer to "Important symbols for good services".

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ⓒ**PIONEER CORPORATION 2003**

T-ZZY OCT. 2003 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

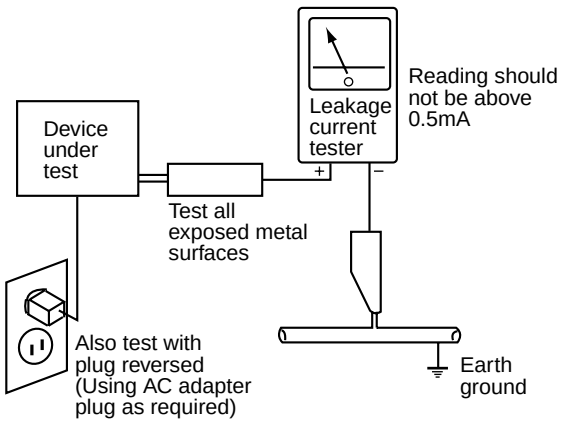
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

IMPORTANT

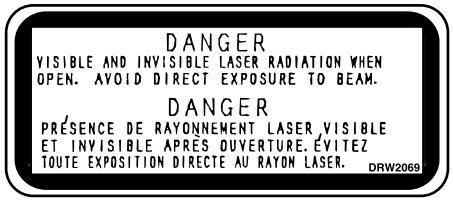
THIS PIONEER APPARATUS CONTAINS INVISIBLE LASER OF CLASS 3b and VISIBLE LASER OF CLASS 2.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 25 mW
WAVELENGTH: 654 - 662 nm

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 36 mW
WAVELENGTH: 780 - 787 nm

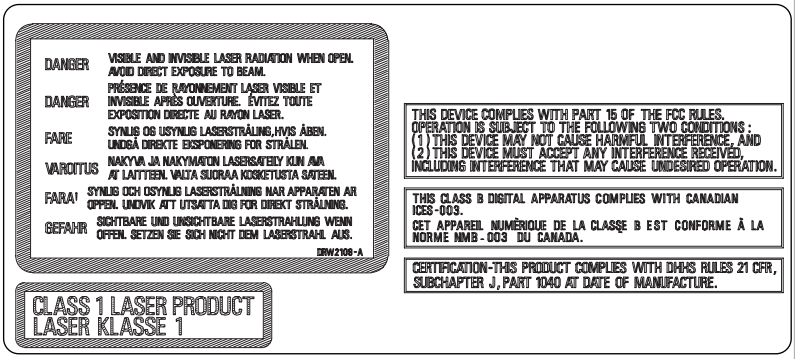
LABEL CHECK

DRIVE Assy LX1

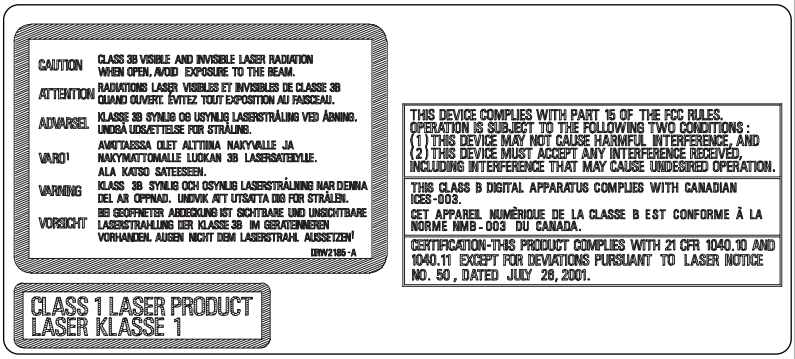

DANGER
VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
DANGER
PRÉSENCE DE RAYONNEMENT LASER VISIBLE ET INVISIBLE APRÈS OUVERTURE. ÉVITEZ TOUTE EXPOSITION DIRECTE AU RAYON LASER.
DRW2069

(DRW2069)

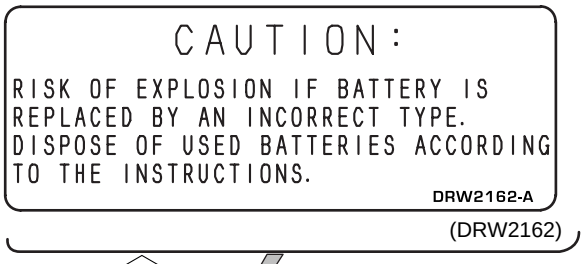
Note: You will see one of the following two labels attached.


DANGER VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
DANGER PRÉSENCE DE RAYONNEMENT LASER VISIBLE ET INVISIBLE APRÈS OUVERTURE. ÉVITEZ TOUTE EXPOSITION DIRECTE AU RAYON LASER.
FARE SYNLIG OG USYNLIG LASERSTRÅLING, HVIS ÅBEN. UNDGÅ DIREKTE EKSPONERING FOR STRÅLEN.
VAROITUS NÄKYVÄ JA NÄKYMÄTÖN LASERSÄTEILY KUN AVA AT LAITTEEN. VALTA SUORAA KOSKETUSTA SÄTEEN.
FARA! SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR APPARATEN ÄR ÖPPEN. UNDVIK ATT UTSÄTTA DIG FÖR DIREKT STRÅLNING.
GEFAHR SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG WENN OFFEN. SETZEN SIE SICH NICHT DEM LASERSTRAHL AUS.
DRW2108-A
CLASS 1 LASER PRODUCT
LASER KLASSE 1
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS : (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.
CERTIFICATION-THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR, SUBCHAPTER J, PART 1040 AT DATE OF MANUFACTURE.

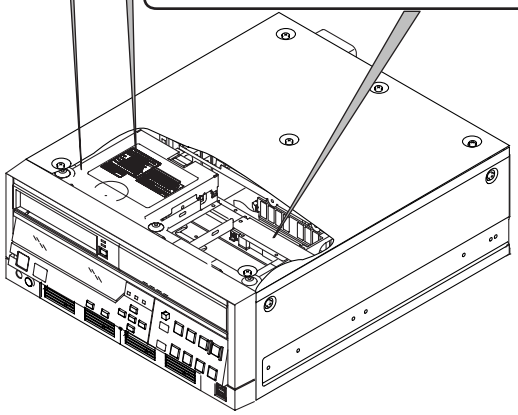
(DRW2109)


CAUTION CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.
ATTENTION RADIATIONS LASER VISIBLES ET INVISIBLES DE CLASSE 3B QUAND OUVERT. ÉVITEZ TOUT EXPOSITION AU FAISCEAU.
ADVARSEL KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
VORSICHT BEI GEÖFFNETER ABDECKUNG IST SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B IM GERÄTEINNEREN VORHANDEN. AUGEN NICHT DEM LASERSTRAHL AUSSETZEN!
DRW2185-A
CLASS 1 LASER PRODUCT
LASER KLASSE 1
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS : (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.
CERTIFICATION-THIS PRODUCT COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JULY 26, 2001.

(DRW2185)


CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
DRW2162-A

(DRW2162)



LITHIUM BATTERY NOTICE

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

When replacing the lithium batteries, follow the note below. Dispose of the used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
The battery used in this device may present a fire or chemical hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate. Replace only with the same Part Number. Use of another battery may present a risk of fire or explosion.

Note : The lithium battery installation position is shown in the exploded views.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

• Recordable discs

Logo	Attributes
DVD-RW	12cm, single-sided, single layer disc Approx. max. recording time: 360 minutes (4.7GB)
DVD-R	12cm, double-sided, single layer disc Approx. max. recording time: 720 minutes (9.4GB) DVD-RW

• Playback only discs

Logo
DVD video

∗ This unit does not support use of 8 cm DVD-R discs.

• CD-R/CD-RW discs cannot be recorded on this unit.

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1. SPECIFICATIONS

1.1 SPECIFICATIONS CHECKS

1.1 Test Specifications

- Conditions and connections for the test
- Conditions for the test

Power voltage: PRV-LX1/JJ: 100 V ±10% AC, 50/60 Hz
PRV-LX1/KU/CA: 120 V±10% AC, 50/60 Hz

Power consumption: PRV-LX1/JJ: 136 W (158 W when all optional accessories are mounted)
PRV-LX1/KU/CA: 2 A max. when all optional accessories are mounted

Ambient temperature: 5-35°C, relative humidity: 85% or less

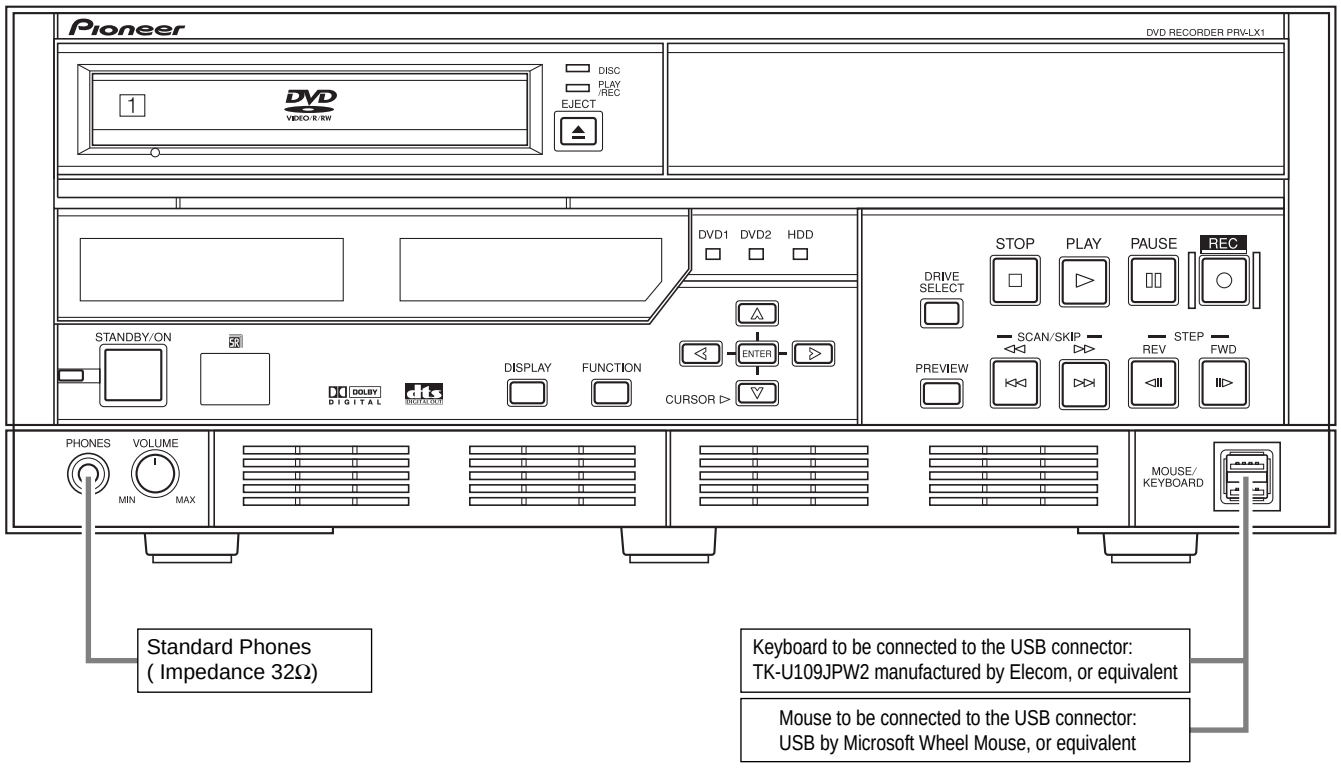
Note: Because the HDD is mounted on the unit, be sure not to impart shock or vibration to the unit while it is operating.

• Recommended media

For the test of the unit, use the following recommended media:

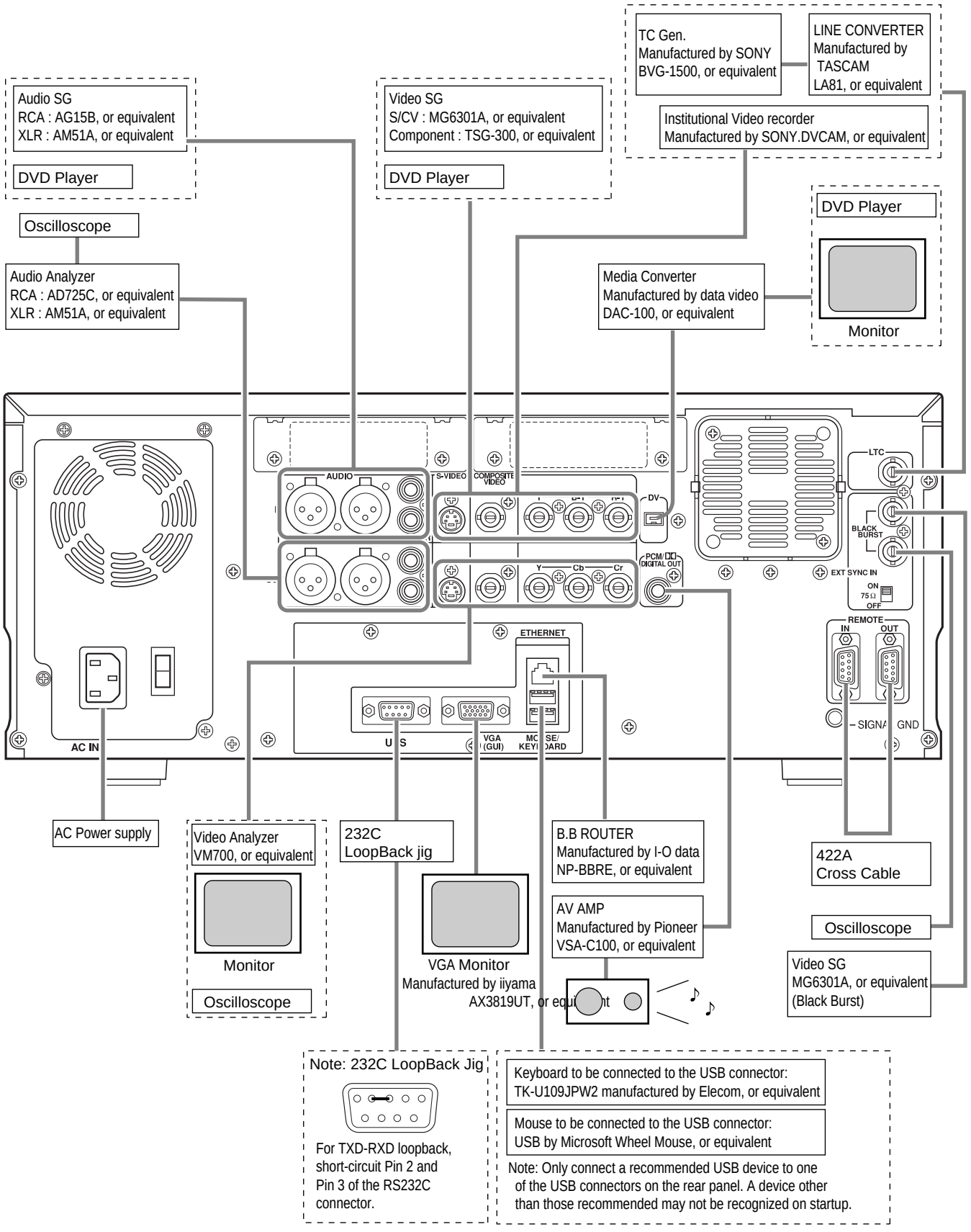
DVD-R: (GGV1139)
DVD-RW: (GGV1050)

- Conditions diagram
- Front panel section



• Rear Panel section

[The connection figure of measuring instruments]



1.2 FUNCTION MENU

■Function Menu Prestore (reference)

Menu item				Setting
EDIT	DVD Menu	Target	Menu Edit To	hYYMMDD_00
		Menu Type / Font	Menu Type	Title Menu
			Font	Helvetica
		Menu Design	Design Select	(Blank)
			Thumbnail	Go to Video
			Button Text	Number / Name
		Menu Modification	Background	Default
			Image	Default
			Disc Name	(Blank)
			Select Color	Auto
			Active Color	Auto
		Navigation Cmd	First Play PGC	Disabled
			Title Post Cmd	Stop
	Project	Record/Name	Name	hYYMMDD_00
			Protect	Disabled
			Record to	HDD
			Num of Clips	0
			Num of Titles	0
			Last Modified Date	YYYYMMDD hh:mm:ss
			Total Capacity	0 MB
		Copy Project	Copy To	(Blank)
		Copy Clip	Copy From	No Item
			Clip	No Item
		Delete	Delete	No Item
	Title	Target Clip		
		Info/Rename	Name	No
			Total Time	00:00:00:00
			Capacity	0MB
		Chapter		
		Editing		
		Title Selection		
	DVD Disc	Finalize		
		Initialize		
		Make a Disc	Target	DVD 1
APP	Auto Capture	IN/OUT Point	Preroll Time	5 Seconds
			Offsest(Frame)	-17 Frames
			Record As	Title(Stop)
			IN/OUT Point	00:00:00:00
		Chapter Point	Chapter Point	00:00:00:00
		EDL Command	Command	Finalize
		EDL	No Item	
		EDL Load/Save/Del	Load	No Item
			Save	Save as edl000.edl
			Delete	No Item
	Copy/Import	Copy	Source	DVD 1
			Target	DVD 2
		Menu Import	Type	Background
			Source	Import Directory
			Source File	No Item
		EDL Import	Source	Import Directory
			Source File	No Item

Menu item				Setting
SET UP	System	System Settings	Keyboard	Japan type(106j)
			Key Repeat Speed	Medium
			Mouse	Generic
			Mouse Speed	Medium
			Time Zone	Tokyo
			Date(mm/dd/yyyy)	MM/DD/YYYY
			Time(hh:mm:ss)	hh:mm:ss
		F-Key Set 1 - 6	F-Key Enable	F-Key Only
			F1	Not Set
			F2	Not Set
			F3	Not Set
			F4	Not Set
			F5	Not Set
			F6	Not Set
		F-Key Set 7 - 12	F7	Not Set
			F8	Not Set
			F9	Not Set
			F10	Not Set
			F11	Not Set
			F12	Not Set
		Network	Network	OFF
			DHCP/Manual	DHCP
			IP Address	--.--.--.--
			Subnet Mask	--.--.--.--
			Gateway	--.--.--.--
		UPS Setting	Model	Disabled
			Shutdown Delay	30 seconds
		Information	System Version	(Application Ver) / (OS Ver)
			Power-On Time	*(h)
			HDD Access	*(h)
			Drive 1(R/W)	*(h)/*(h)
			Drive 2(R/W)	*(h)/*(h)
		HDD Tools	Target Drive	Internal HDD
	Operation	Control Settings	Control	Local
			Port	RS-422A
			Time Code	RS-422A
		Video Settings	External Sync	Disabled
			OSD	Enabled
			Composite OUT	Source Monitor
			Background Color	Black
			DV OUT	Disabled
			Test Signal	Start
		HDD Recording	Time Shift Recording	Enabled
		GUI Control	Language	Japanese

Menu item				Setting
SETUP	Recording	Video/Audio	Video Encoding Rate	9.644Mbps
			Video Filter(NR)	OFF
			Audio Encode	Dolby Digital
			Audio Level	L : +0 / R : +0
			Aspect	4:3
			Setup Level	0 IRE
		Others	Auto Chapter	Manual
			REC Button	REC Start
	Playback	Video	Aspect	4:3(LB)
			Still Mode	Frame
		Audio	Dolby Digital OUT	Dolby Digital
			DTS OUT	OFF
			96kHz PCM OUT	Convert To 48kHz
			MPEG OUT	MPEG
		Language	Audio	Japanese
			Subtitle	Japanese
			DVD Menu	Japanese
		Others	Parental Level	8

STATUS	Drive	HDD
	Project	[NEW]hYYMMDD_00
	V Input	Composite
	A Input	RCA
	HDD	Project 1
		***.**(GB)
	DVD1	No Disc
	DVD2	No Disc

Factory-preset values for the main unit

• Front panel
Setting of the VOLUME control: MIN

• Rear panel
Setting of the Terminate switch: ON (upper position)

1.3 SPECIFICATIONS

• DVD RECODER [PRV-LX1]

General:

Power rating:	AC 120 V, 50/60 Hz
Power consumption:	Maximum 2.0 A
Power consumption during idling:	6.5 W
Weight:	About 14 kg (about 31 lb)
External dimensions:	427 (W) x 179.5 (H) x 509.5 (D) mm 16-13/16 (W) x 7-1/16 (H) x 20-1/16 (D) in
Ambient temperature during use:	+5°C to +35°C (+41°F to +95°F)
Ambient humidity during use:	5-85% RH (without condensation)

Recording:

Recording format:	DVD: DVD-Video
HDD:	VOB FILE
Recordable discs:	DVD-R DVD-RW
Video recording format:	
Sampling frequency:	13.5 MHz
Compression:	MPEG
Audio recording format:	
Sampling frequency:	48 kHz
Compression format:	Dolby Digital and Linear PCM (non-compressed)
Recording time	
DVD-R/RW (manual rate) :	About 1-6 hours
HDD (manual rate):	About 23-100 hours

Playback:

Playable discs:	DVD-Video, DVD-R, DVD-RW (CD-R, CD-RW, and CD-ROM are supported for data read only)

Video input:

Composite:	BNC x 1, 1.0 Vp-p, 75 Ω
S-VIDEO:	4-pin mini DIN x 1 Y: 1.0 Vp-p, 75 Ω C: 0.286 Vp-p, 75 Ω
Component:	BNC x 3 Y: 1.0 Vp-p, 75 Ω B-Y: 0.525/0.7 Vp-p selectable, 75 Ω (with 75% color bar) R-Y: 0.525/0.7 Vp-p selectable, 75 Ω (with 75% color bar)

Video Output:

Composite:	BNC x 1, 1.0 Vp-p, 75 Ω
S-VIDEO:	4P mini DIN x 1 Y:1.0 Vp-p, 75 Ω C: 0.286 Vp-p, 75 Ω
Component:	BNC x 3 Y: 1.0 Vp-p, 75 Ω Pb: 0.7 Vp-p, 75 Ω Pr: 0.7 Vp-p, 75 Ω

Audio input:

L, R: unbalanced:	Pin jack x 2, 2 Vrms (0 dBfs), 22 kΩ(or more)
CH1 (L), CH2 (R): balanced:	XLR (female) x 2, +4 dBu, 600 Ω

Audio output:

L, R: unbalanced:	Pin jack x 2, 2 Vrms (0 dBfs), 1.5 kΩ(or less)
CH1 (L), CH2 (R): balanced:	XLR (male) x 2, 0 dBu, 600 Ω load, low-impedance
Digital: unbalanced:	Pin jack x 1, 0.5 Vp-p, 75 Ω

External Sync Input:

BNC x 2, black burst, 0.3 Vp-p, 75 Ω (ON/OFF)

Other:

DV input/output:	4 pin (i.Link/IEEE 1394 compatible) x 1
LTC input:	BNC x 1, 0.5-8 Vp-p, 3 kΩ
Remote input:	D-sub 9-pin (female) RS-422A compatible x 1 (Inch threads)
Remote output:	D-sub 9-pin (female) RS-422A compatible x 1 (Inch threads)
UPS control:	D-sub 9-pin (male) RS-232C compatible x 1 (Inch threads)
VGA output:	Mini D-sub 15-pin (female) x 1 (Inch threads)
Mouse/keyboard connectors:	4P type A (USB 2.0 compatible) x 4
Ethernet:	8P type (IEEE802.3 compatible, category 5) x 1

Accessories:

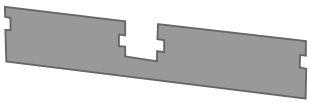
- Remote control unit 1
- AA batteries 2
- Air filter replacement set 1
- Power cord 1
- Warranty 1
- Operating Instructions 1
- Sub Manual E (or Sub Manual E2) 1

● *Specifications and appearance are subject to change without notice.*

[Accessories]

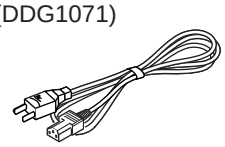
Air filter replacement set:

Air filter: x4
(DEC2530)

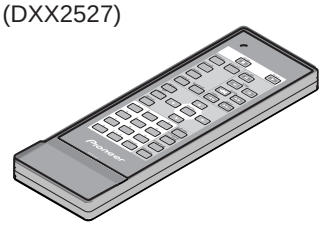


Air Filter Replacement
Instructions and Precautions: x1

Power cord: x1
(DDG1071)

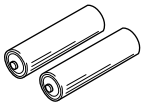


Remote control unit : x1
(DXX2527)



Operating Instructions: x1
Sub Manual E (or Sub Manual E2) x1
Warranty: x1

AA batteries (R6P,AA): x2



• DVD-R/RW WRITER UNIT [PRA-DW11]

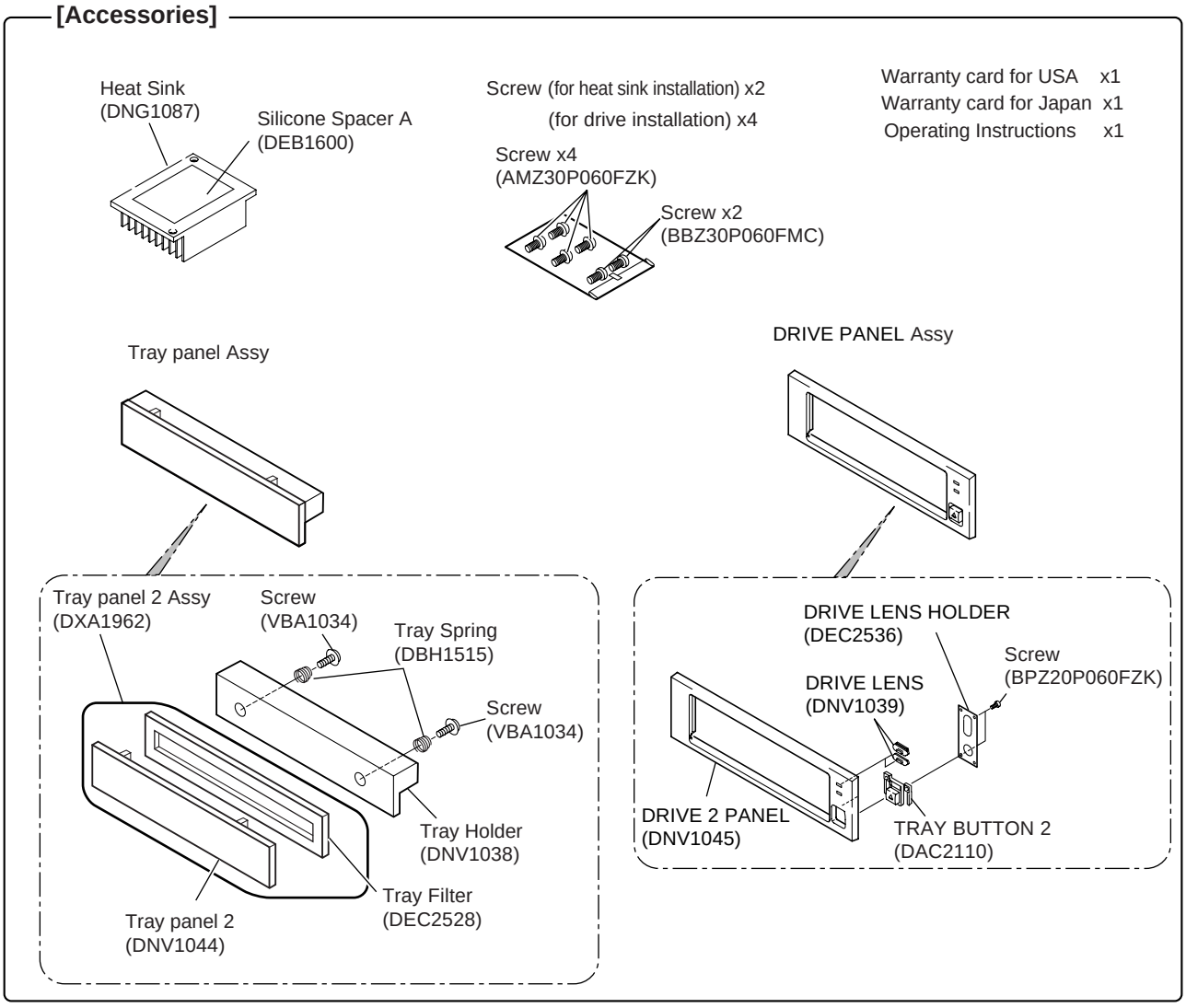
[Miscellaneous]

Dimensions..... 148 (W) x 42.3 (H) x 198 (D) mm (drive body only)
Weight..... 1.8 kg (including packaging)
Ambient operating temperature..... +5 °C – +35 °C (PRV-LX1 installed)
Ambient operating humidity..... 5 % – 85 % (PRV-LX1 installed) (without condensation)
Ambient storage temperature..... –40 °C – +60 °C
Ambient storage humidity..... 5 % – 90 % (without condensation)

[Accessories]

Heat sink (with heat dissipation sheet)..... 1
Tray panel 2..... 1
Drive 2 frame..... 1
Screws (for heat sink installation)..... 2
Flange screws (black, for drive installation)..... 4
Warranty card for USA..... 1
Warranty card for Japan..... 1
Operating Instructions..... 1

• *Specifications and appearance are subject to change without notice.*

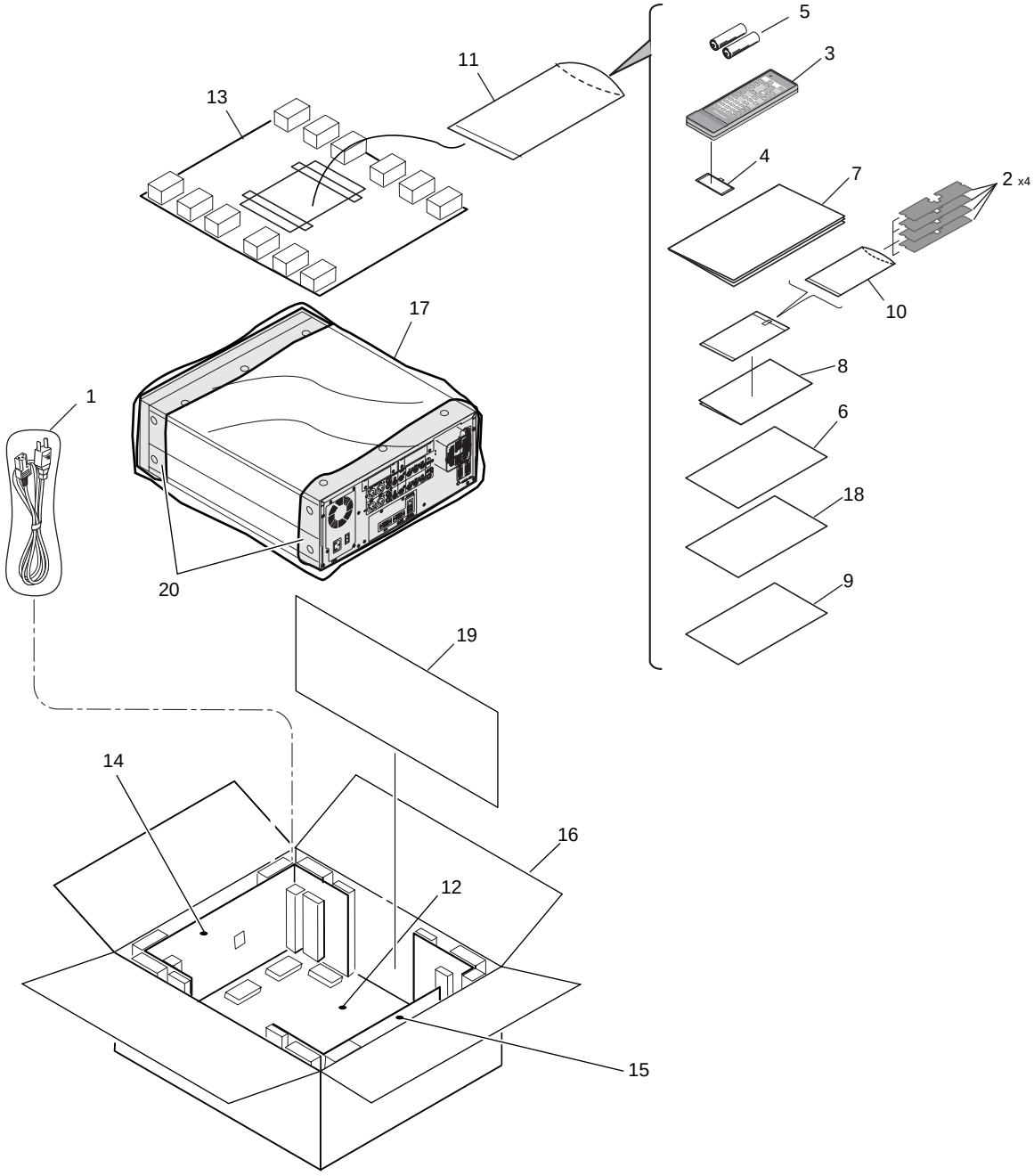


2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 DVD RECORDER (PRV-LX1)

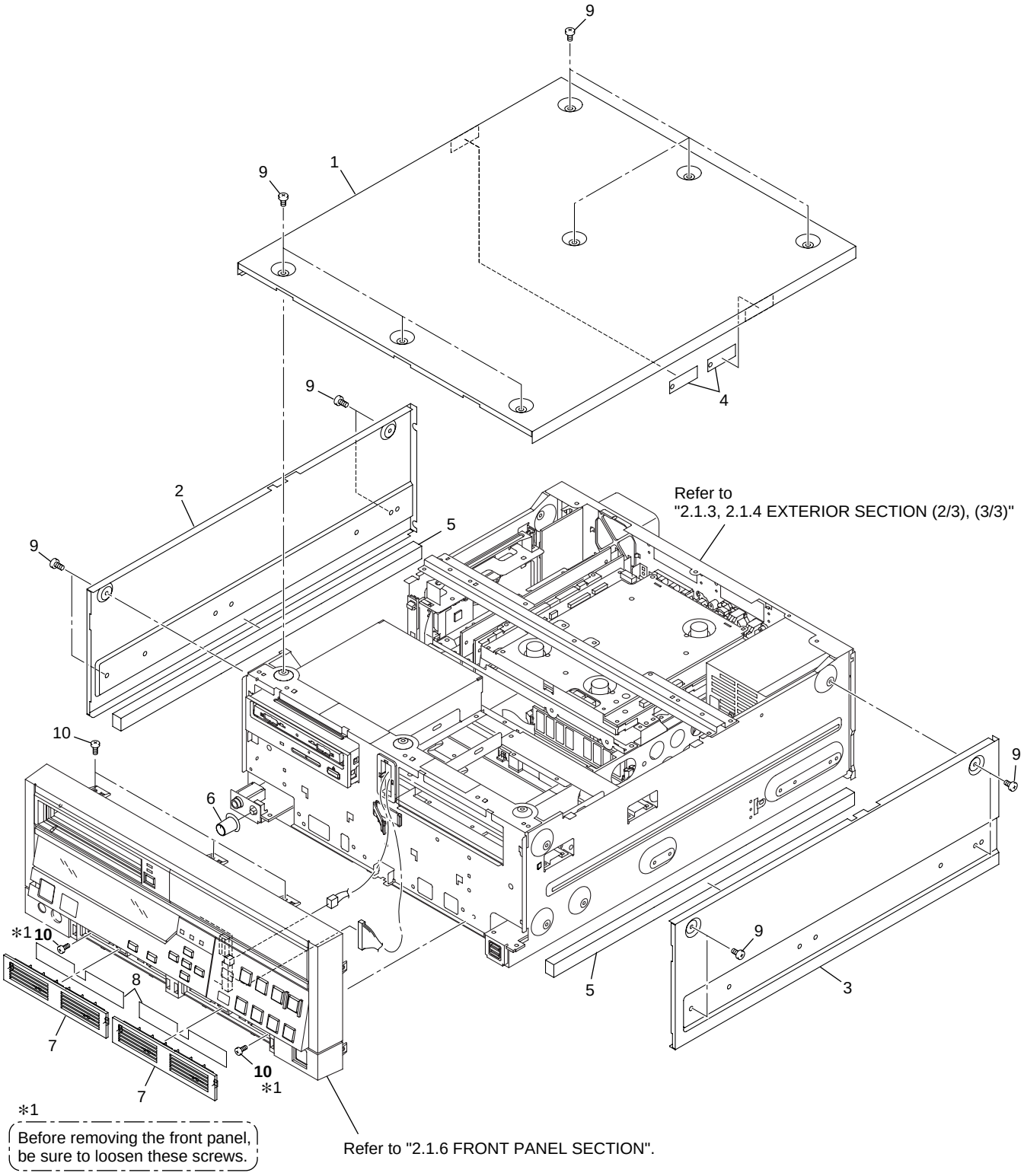
2.1.1 PACKING



PACKING Parts List

Mark	No.	Description	Part No.
⚠	1	Power Cord	DDG1071
	2	Air Filter	DEC2530
	3	Remote Control Unit	DXX2527
	4	Battery Cover	VNK4403
NSP	5	Dry Cell Battery (R6P,AA)	VEM1031
NSP	6	Warranty Card	DRY1210
	7	Operating Instructions (English/French)	DRC1195
NSP	8	Air Filter Replacement Instructions and Precautions	DRH1070
	9	Sub Manual E (or Sub Manual E2)	DRH1075 (DRH1076)
NSP	10	Polyethylene Bag (100 x 230 x 0.018)	Z21-010
NSP	11	Poly Bag (235 x 320 x 0.06)	Z21-019
	12	Pad (PS)	DHA1571
	13	Pad (PS)	DHA1572
	14	Pad (PS)	DHA1575
	15	Pad (PS)	DHA1576
	16	Packing Case	DHG2346
	17	Polyester Bag	DHL1124
NSP	18	User Sheet (KU)	DRY1220
	19	Spacer	DHC1061
	20	Packing Sheet	RHC1052

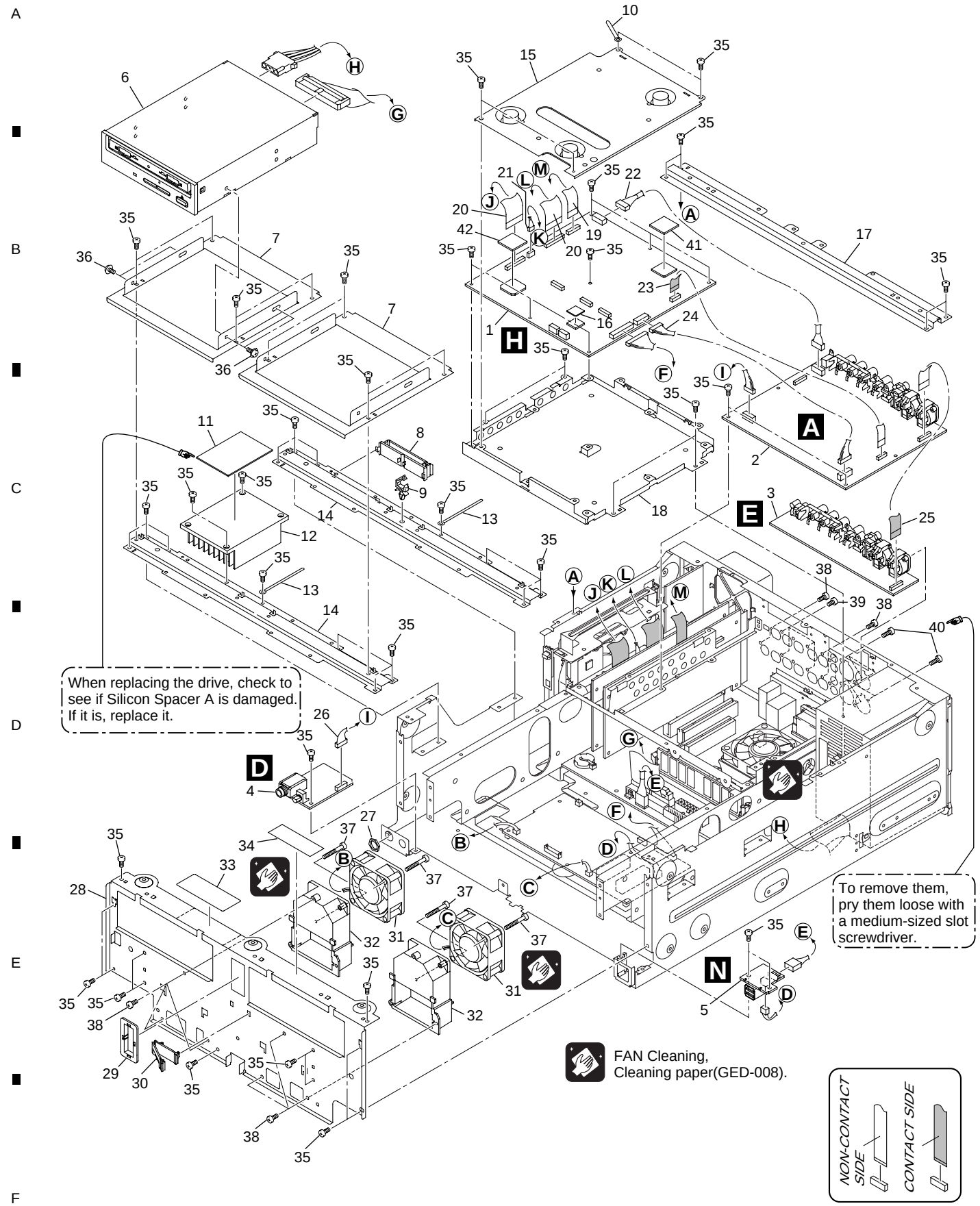
2.1.2 EXTERIOR SECTION (1/3)



EXTERIOR SECTION Parts List

Mark No.	Description	Part No.
1	Bonnet UP	DNE1439
2	Bonnet L	DNE1441
3	Bonnet R	DNE1440
4	Edge Sheet	DEC2567
5	Packing A	DEC2565
6	Volume Knob2	DAC2175
7	Filter Cover	DNV1036
8	Air Filter	DEC2530
9	Screw	BMZ40P060FZK
10	Screw	BBZ30P060FMC

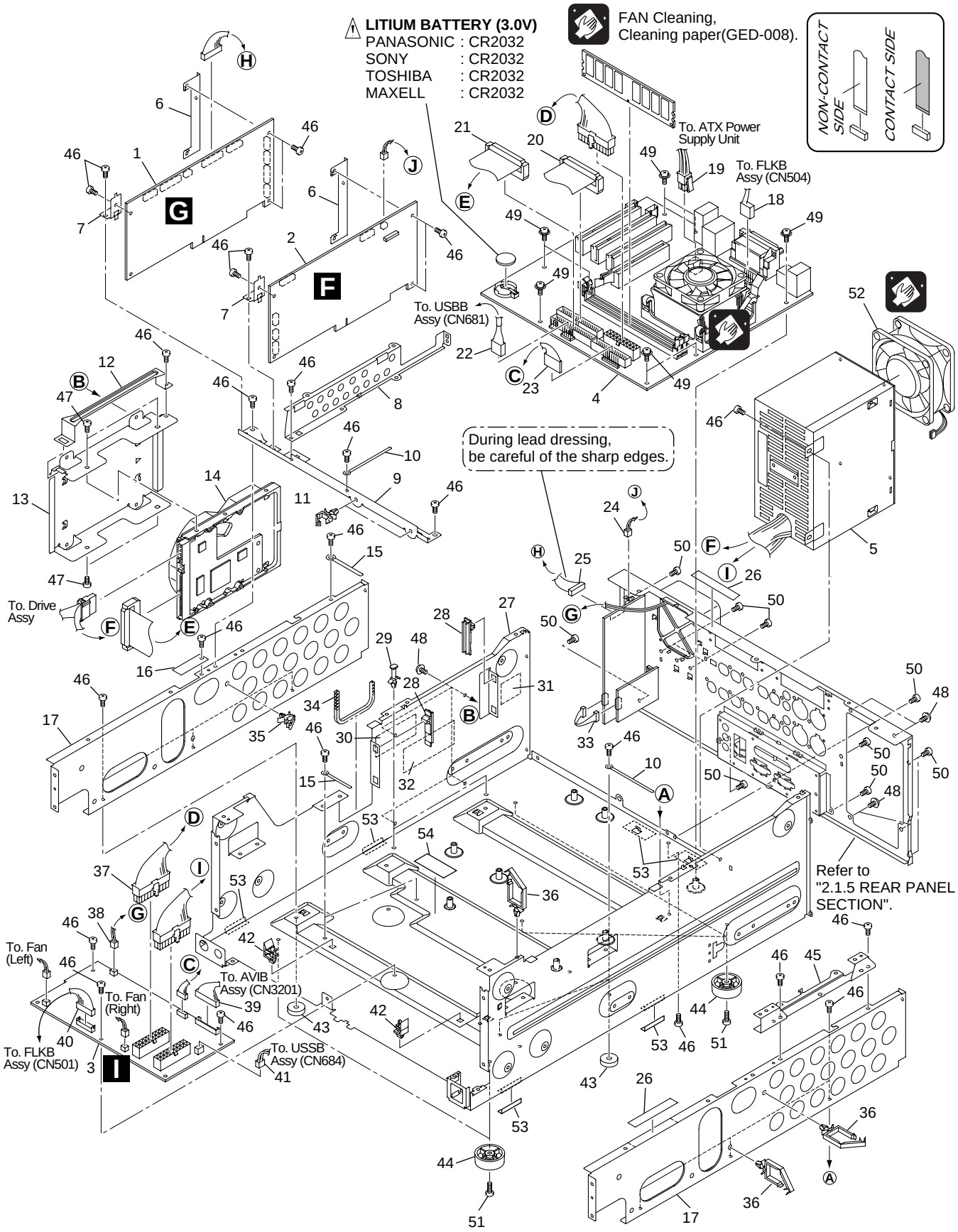
2.1.3 EXTERIOR SECTION (2/3)


When replacing the drive, check to see if Silicon Spacer A is damaged. If it is, replace it.
To remove them, pry them loose with a medium-sized slot screwdriver.
FAN Cleaning, Cleaning paper(GED-008).
NON-CONTACT SIDE
CONTACT SIDE

EXTERIOR SECTION (2/3) parts List

Mark	No.	Description	Part No.
	1	AVIB Assy	DWV1198
	2	JKIB Assy	DWZ1120
	3	JKOB Assy	DWZ1121
	4	HPVB Assy	DWZ1115
	5	USBB Assy	DWZ1109
	6	DRIVE Assy LX1	DXX2532
NSP	7	Drive Base	DNH2548
	8	Flat Cable Clamp	DEC2534
NSP	9	Wire Saddle	DEC2543
	10	Cord Holder	RNH-184
	11	Silicone Spacer A	DEB1600
	12	Heat Sink	DNG1087
	13	Cord Holder	RNH1005
NSP	14	Front Bridge	DNE1451
NSP	15	AVI Shield	DNE1443
	16	Radiation Sheet L	VEB1332
NSP	17	Rear Bridge	DNE1448
NSP	18	AVI Base	DNE1442
	19	Flexible Cable (30P)	DDD1229
	20	Flexible Cable (50P)	DDD1226
	21	Connector Assy 4P	DKP3640
	22	Housing Assy 6P	DKP3658
	23	Flexible Cable (20P)	DDD1228
	24	Connector Assy 7P	DKP3639
	25	Flexible Cable (30P)	DDD1230
	26	Connector Assy 8P	DKP3643
	27	Nut	NKX2FUC
NSP	28	Panel Stay	DNE1445
NSP	29	Protector	DNK1340
	30	Flat Cable Clamp	DEC1850
	31	DC Fan Motor	AXM7014
NSP	32	Fan Duct	DNK4155
	33	Caution Label	DRW2159
	34	65 Label	ARW7050
	35	Screw	BBZ30P060FMC
	36	Screw	AMZ30P060FZK
	37	Screw	BPZ30P350FZK
	38	Screw	BPZ30P080FZK
	39	Screw	BBZ30P060FZK
	40	Screw	BPZ26P100FMC
	41	EMC Sheet S	DEB1624
	42	EMC Sheet	DEB1620

2.1.4 EXTERIOR SECTION (3/3)



EXTERIOR SECTION (3/3) parts List

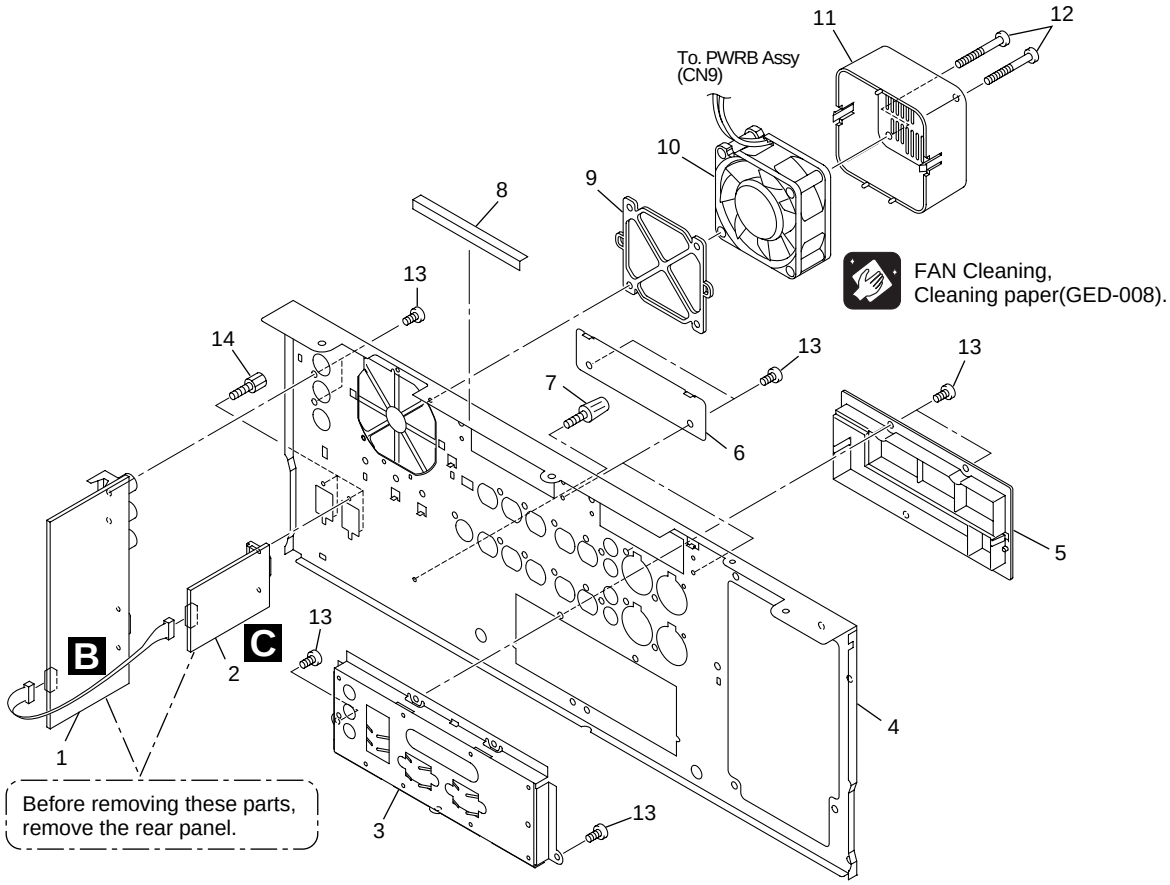
Mark	No.	Description	Part No.
	1	PCIB Assy	DWP1080
	2	DECB Assy	DWP1081
	3	PWRB Assy	DWZ1106
	4	MOTHER BOARD Assy	DXF1002
⚠	5	ATX Power Supply Unit	DXF1001
NSP	6	Board Stay R	DNF1677
NSP	7	Board Stay F	DNF1679
NSP	8	PCI Cover	DNE1449
NSP	9	Center Stay	DNE1444
	10	Card Holder	RNH1005
	11	Locking Wire Saddle	DEC1717
NSP	12	HDD Handle	DNE1450
NSP	13	HDD Base	DNH2549
	14	HDD 120G 4R120L0	VXF1016
	15	Card Holder	RNH-184
	16	Edge Sheet	DEC2567
NSP	17	FR Plate	DND1246
	18	Connector Assy 10P-3P	DKP3645
	19	Connector Assy 4P	DKP3656
	20	Connector Assy 40P	DKP3648
	21	Connector Assy 40P	DKP3647
	22	Connector Assy 10P	DKP3646
	23	Connector Assy 9P-6P	DKP3635
	24	Connector Assy 2P	DKP3638
	25	Connector Assy 11P	DKP3642
NSP	26	Guard Tape	DEC2587
NSP	27	Main Chassis	DNA1290
NSP	28	PCB Support	VEC1267
NSP	29	Card Spacer	QEC1012
	30	Label	BAX1238 **(*1)**
NSP	31	Label	VRW-348
	32	Caution Label	DRW2160
	33	Connector Assy 6P	DKP3644
	34	Edge Guard A	DEC2566
NSP	35	Wire Saddle	DEC2543
	36	Wire Saddle (8S)	DEC1760
	37	Connector Assy 20P	DKP3657
	38	Connector Assy 2P	DKP3650
	39	Connector Assy 14P	DKP3636
	40	Connector Assy 20P	DKP3637
	41	Connector Assy 3P	DKP3655
NSP	42	Card Edge Spacer	DEC1211
	43	Screw Guard	DEB1447
	44	Leg	DEC2583
NSP	45	Jack Stay	DNE1446
	46	Screw	BBZ30P060FMC
	47	Screw	DBA1125
	48	Screw	AMZ30P060FZK
	49	Screw	AMZ30P060FMC
	50	Screw	BBZ30P060FZK
	51	Screw	BBZ30P100FMC
	52	Fan Unit	DZM1001
	53	Driver Sheet Assy	VEC2242
	54	Caution Label	DRW2162

(*1)

No.	Description	At factory shipping	For Service
30	Label	BAX1217	BAX1238

Factory shipping
Character printing color: Black
For Service
Character printing color: orange

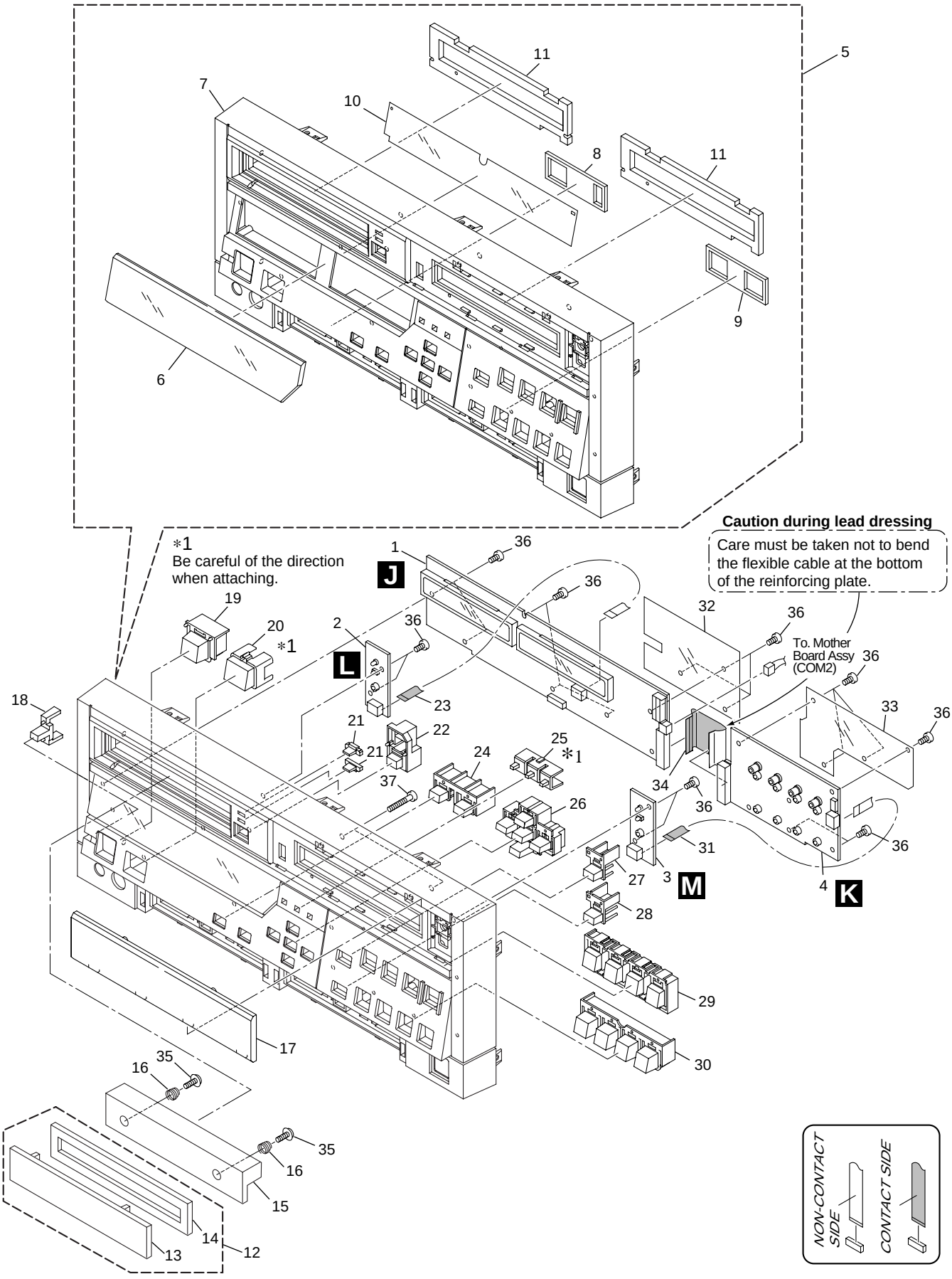
2.1.5 REAR PANEL SECTION



REAR PANEL SECTIN Parts List

Mark	No.	Description	Part No.
	1	JKDB Assy	DWZ1117
	2	422IB Assy	DWZ1116
NSP	3	Terminal Panel Assy	DNE1468
	4	Rear Panel	DNC1638
NSP	5	Terminal Cover	DNK4154
NSP	6	Blind Plate	DNF1678
	7	Earth Terminal	DKE-102
NSP	8	Guard Tape	DEC2587
	9	Fan Spacer	AMR7265
	10	DC Fan Motor	AXM7014
	11	Fan Cover	AMR7264
	12	Screw	ABA7003
	13	Screw	BBZ30P060FZK
	14	Screw	BBA1051

2.1.6 FRONT PANEL SECTION

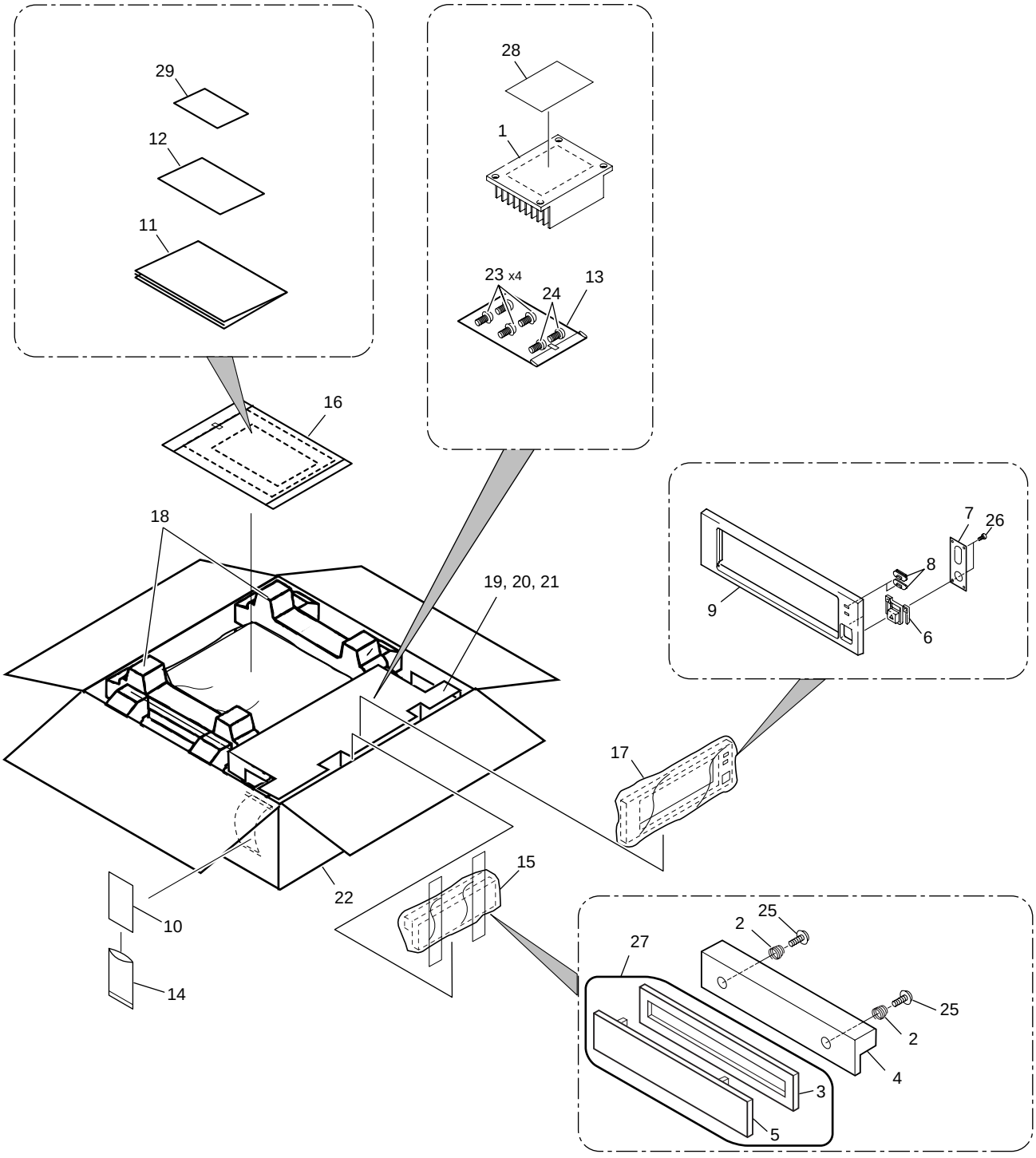


FRONT PANEL SECTION Parts List

Mark	No.	Description	Part No.
	1	FLKB Assy	DWZ1118
	2	DRV1B Assy	DWZ1110
	3	DRV2B Assy	DWZ1111
	4	KEYB Assy	DWZ1108
	5	Front Panel Assy	DXA1960
NSP	6	FL Window	DAK1001
NSP	7	Front Panel	DAX1013
NSP	8	Air Seal A	DED1164
NSP	9	Air Seal B	DED1165
NSP	10	FL Filter	DEC2531
NSP	11	Drive Filter	DED1163
	12	Tray Panel 1 Assy	DXA1961
NSP	13	Tray Panel 1	DNV1037
NSP	14	Tray Filter	DEC2528
	15	Tray Holder	DNV1038
	16	Tray Spring	DBH1515
	17	Drive 2 Blind Panel	DNV1040
	18	Power Lens	DNV1043
	19	Power Button	DAC2105
	20	IR Window	DNV1042
	21	Drive Lens	DNV1039
	22	Tray Button 1	DAC2099
	23	Flexible Cable (6P)	DDD1231
	24	ETC Button	DAC2103
	25	Drive Select Lens	DNV1041
	26	Cursor Button	DAC2104
	27	Drive Select Button	DAC2102
	28	Preview Button	DAC2107
	29	Play Button 1	DAC2100
	30	Play Button 2	DAC2101
	31	Flexible Cable (6P)	DDD1231
	32	Barrier 1	DEC2585
	33	Barrier 2	DEC2533
	34	Flexible Cable (25P)	DDD1232
	35	Screw	VBA1034
	36	Screw	BPZ30P080FZK
	37	Screw	BPZ30P250FMC

2.2 DVD-R/RW WRITER UNIT

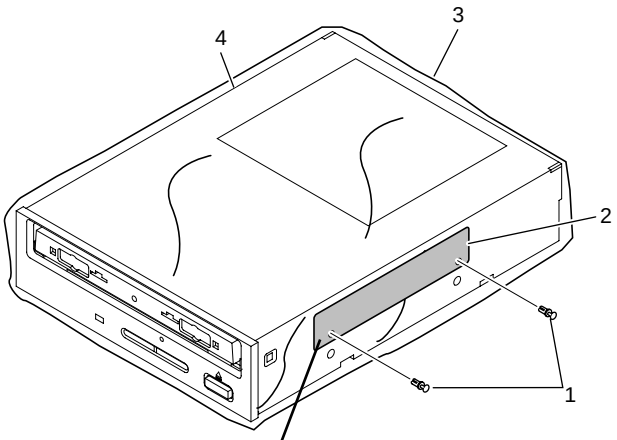
2.2.1 PACKING



PACKING Parts List

Mark	No.	Description	Part No.
	1	Heat Sink	DNG1087
NSP	2	Tray Spring (SUS)	DBH1515
	3	Tray Filter	DEC2528
	4	Tray Holder (ABS)	DNV1038
NSP	5	Tray Panel 2 (ABS)	DNV1044
	6	Tray Button 2 (ABS)	DAC2110
	7	Drive Lens Holder	DEC2536
	8	Drive Lens (PMMA)	DNV1039
	9	Drive 2 Panel	DNV1045
NSP	10	Warranty Card	ARY1093
	11	Operating Instructions	DRC1196
NSP	12	Warranty Card	DRY1210
NSP	13	Polyethylene Bag (0.05 x 60 x 100)	DHL1138
NSP	14	Polyethylene Bag (100 x 230 x 0.018)	Z21-010
NSP	15	Polyethylene Bag (180 x 80 x 0.03)	Z21-015
NSP	16	Polyethylene Bag (230 x 340 x 0.03)	Z21-038
NSP	17	Polyethylene Bag (240 x 80 x 0.05)	Z21-039
	18	Pad A04	DHA1540
	19	Accessory Case A (PAP)	DHF1050
	20	Accessory Case B (PAP)	DHF1051
	21	Accessory Case C (PAP)	DHF1052
	22	Packing Case	DHG2347
	23	Screw	AMZ30P060FZK
	24	Screw	BBZ30P060FMC
	25	Screw	VBA1034
	26	Screw	BPZ20P060FZK
	27	Tray Panel 2 Assy	DXA1962
	28	Silicone Spacer A	DEB1600
	29	Region Caution	DRM1259

2.2.2 EXTERIOR SECTION



Note:
When replacing the Drive Assy LX1 (DXX2532) for using the unit as the PRA-DW11, also replace the name plate.

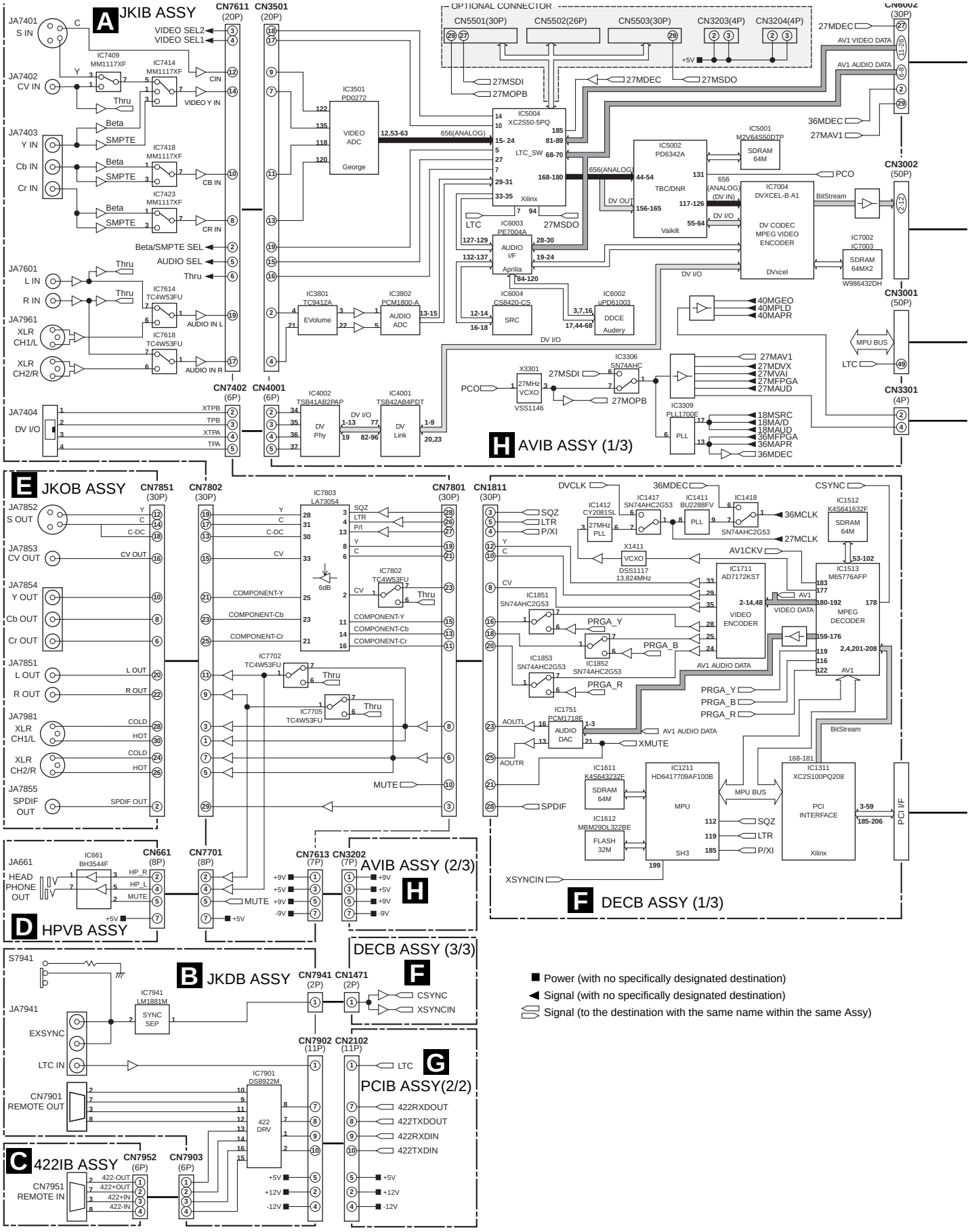
EXTERIOR SECTION Parts List

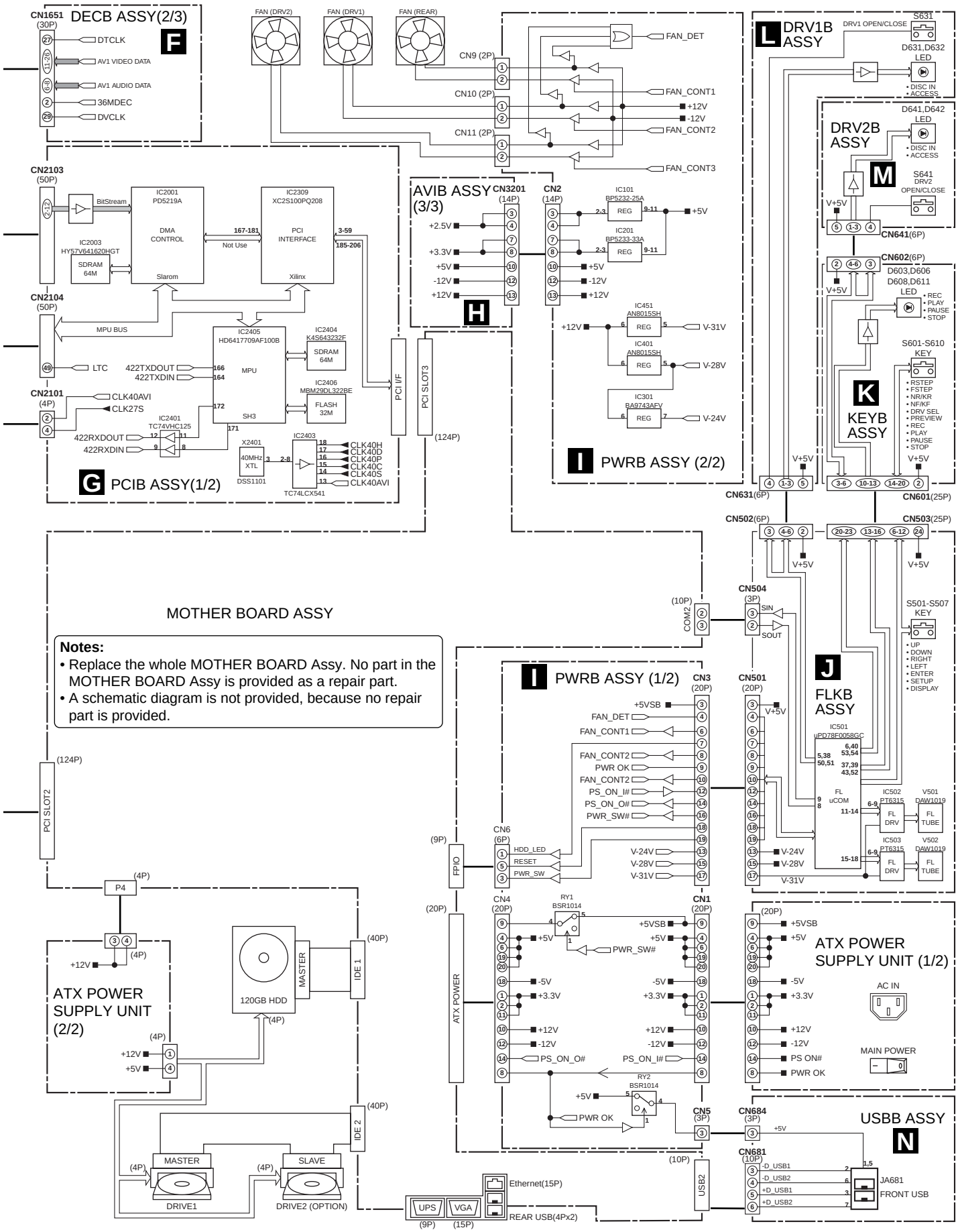
Mark	No.	Description	Part No.
	1	Rivet	DEC1318
	2	Name Plate	DEC2602
	3	Bag	DHL1093
	4	Drive Assy LX1	DXX2532

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

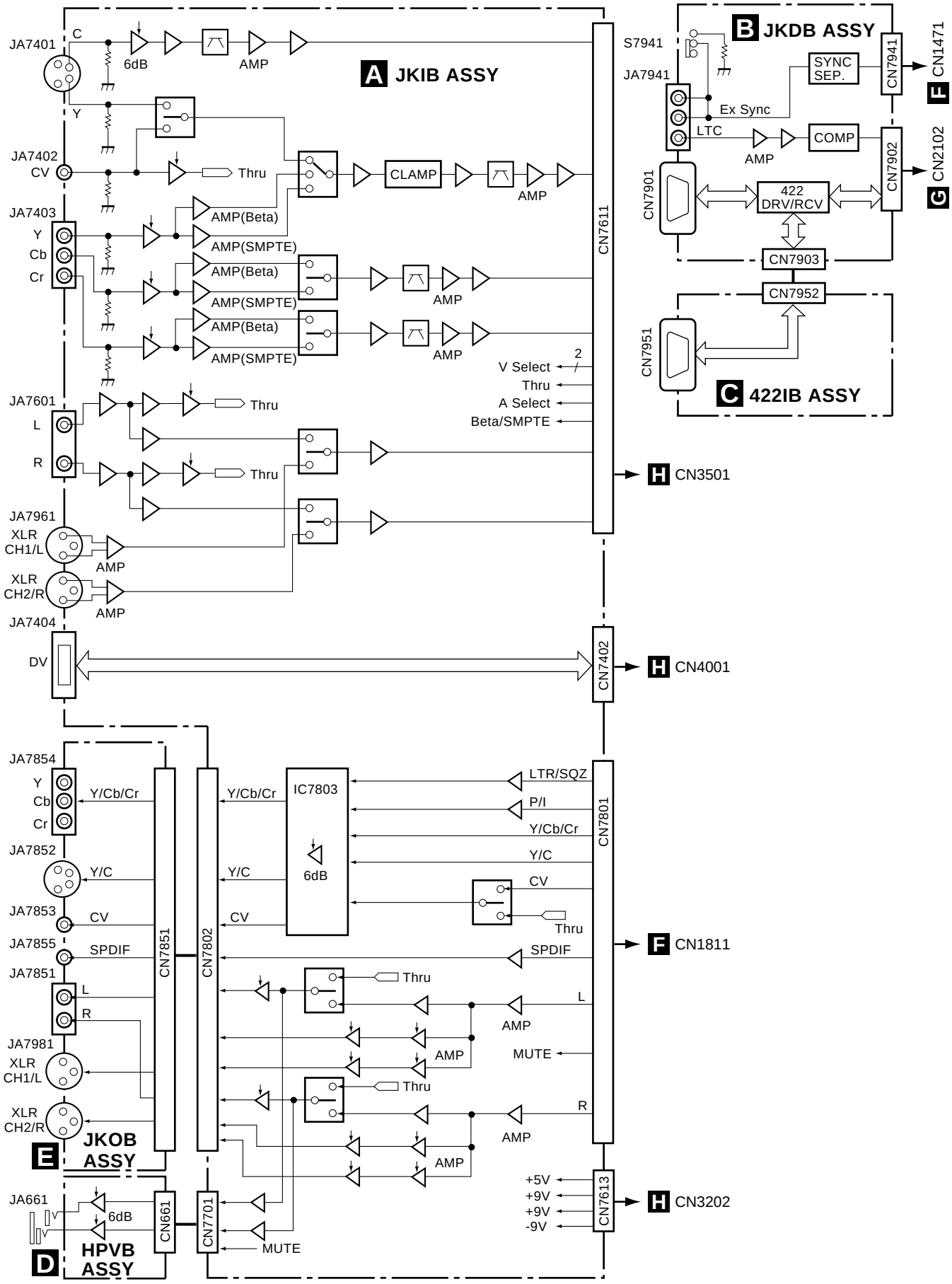
3.1 BLOCK DIAGRAM

3.1.1 OVERALL BLOCK DIAGRAM

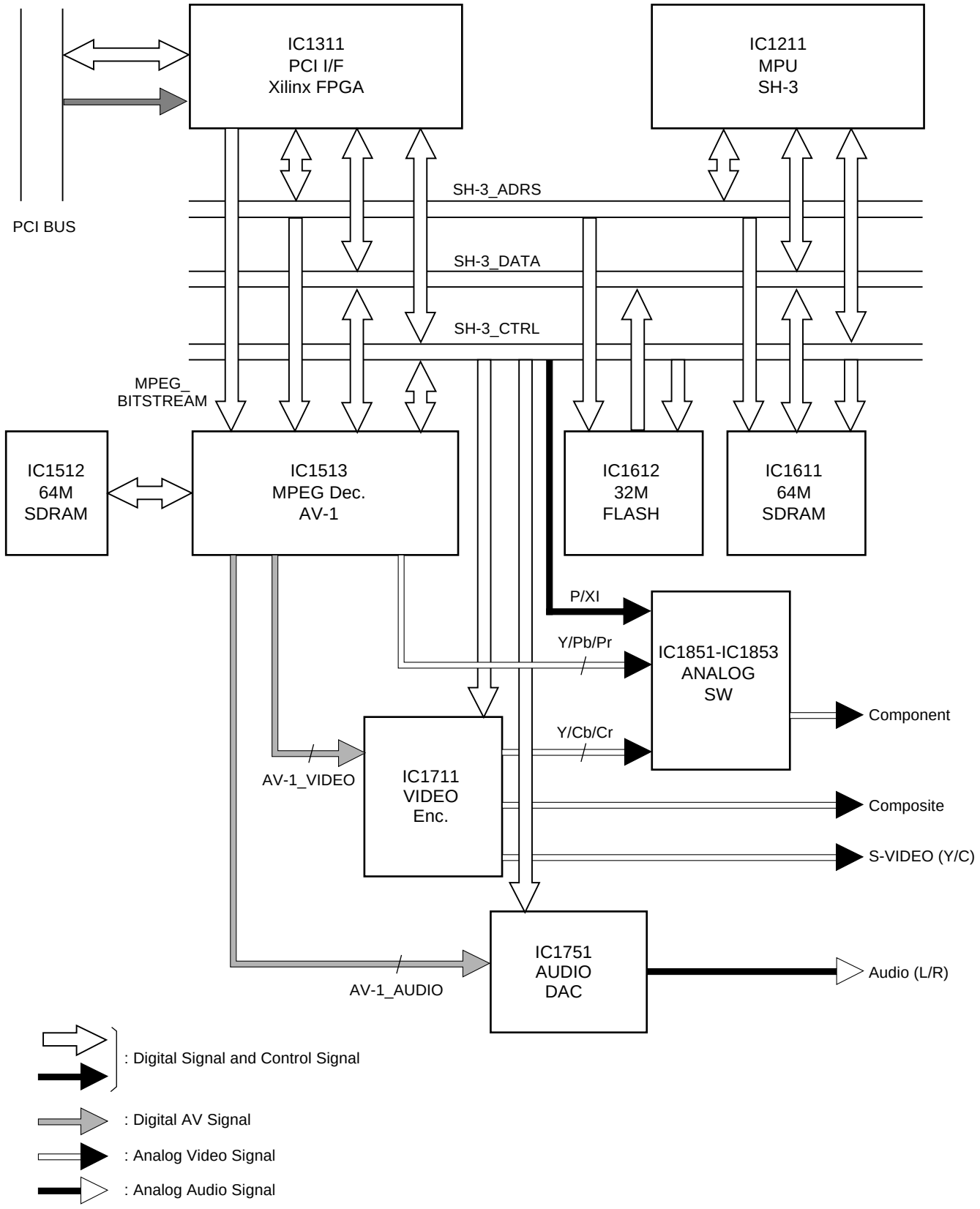



F DECB ASSY(2/3)
CN1651 (30P)
DTCLK
AV1 VIDEO DATA
AV1 AUDIO DATA
36MDEC
DVCLK
FAN (DRV2)
FAN (DRV1)
FAN (REAR)
CN9 (2P)
CN10 (2P)
CN11 (2P)
FAN_DET
FAN_CONT1
+12V
-12V
FAN_CONT2
FAN_CONT3
L DRV1B ASSY
DRV1 OPEN/CLOSE
S631
D631,D632
LED
• DISC IN
• ACCESS
DRV2B ASSY
M
D641,D642
S641
DRV2 OPEN/CLOSE
CN641(6P)
CN602(6P)
D603,D606
D608,D611
• REC
• PLAY
• PAUSE
• STOP
S601-S610
KEY
K KEYB ASSY
• RSTEP
• FSTEP
• NR/KR
• NF/KF
• DRV SEL
• PREVIEW
• REC
• PLAY
• PAUSE
• STOP
CN631(6P)
CN601(25P)
CN502(6P)
CN503(25P)
CN2103 (50P)
CN2104 (50P)
CN2101 (4P)
IC2001 PD5219A
DMA CONTROL
PCI INTERFACE
BitStream
Slarom
Xilinx
IC2003 HY57V641620HGT
SDRAM 64M
167-181
Not Use
3-59
185-206
MPU BUS
IC2405 HD6417709AF100B
MPU
SH3
IC2404 K4S643232F
SDRAM 64M
IC2406 MBM29DL322BE
FLASH 32M
LTC
422TXDOUT
422TXDIN
CLK40AVI
CLK27S
422RXDOUT
422RXDIN
IC2401 TC74VHC125
X2401
40MHz XTL
DSS1101
IC2403
TC74LCX541
CLK40H
CLK40D
CLK40P
CLK40C
CLK40S
CLK40AVI
PCI I/F
PCI SLOT3
(124P)
G PCIB ASSY(1/2)
AVIB ASSY (3/3)
H
CN3201 (14P)
CN2 (14P)
+2.5V
+3.3V
+5V
-12V
+12V
IC101 BP5232-25A
IC201 BP5233-33A
REG
IC451 AN8015SH
IC401 AN8015SH
IC301 BA9743AFV
V-31V
V-28V
V-24V
I PWRB ASSY (2/2)
MOTHER BOARD ASSY
Notes:
• Replace the whole MOTHER BOARD Assy. No part in the MOTHER BOARD Assy is provided as a repair part.
• A schematic diagram is not provided, because no repair part is provided.
PCI SLOT2
(124P)
I PWRB ASSY (1/2)
CN3 (20P)
+5VSB
FAN_DET
FAN_CONT1
FAN_CONT2
PWR OK
PS_ON_I#
PS_ON_O#
PWR_SW#
CN6 (6P)
HDD_LED
RESET
PWR_SW
FPIO
(9P)
(20P)
ATX POWER
CN4 (20P)
CN1 (20P)
RY1 BSR1014
RY2 BSR1014
-5V
+3.3V
+12V
-12V
CN5 (3P)
PWR OK
CN501 (20P)
J FLKB ASSY
IC501 uPD78F0058GC
FL uCOM
IC502 PT6315
IC503 PT6315
V501 DAW1019
V502 DAW1019
FL DRV
FL TUBE
CN504 (3P)
COM2
SIN
SOUT
S501-S507
KEY
• UP
• DOWN
• RIGHT
• LEFT
• ENTER
• SETUP
• DISPLAY
ATX POWER SUPPLY UNIT (1/2)
AC IN
MAIN POWER
ATX POWER SUPPLY UNIT (2/2)
P4
(4P)
+12V
120GB HDD
MASTER
IDE 1
IDE 2
(40P)
+5V
DRIVE1
DRIVE2 (OPTION)
SLAVE
USBB ASSY
N
CN684 (3P)
CN681 (10P)
USB2
-D_USB1
-D_USB2
+D_USB1
+D_USB2
JA681
FRONT USB
Ethernet(15P)
REAR USB(4Px2)
UPS
VGA
(9P)
(15P)

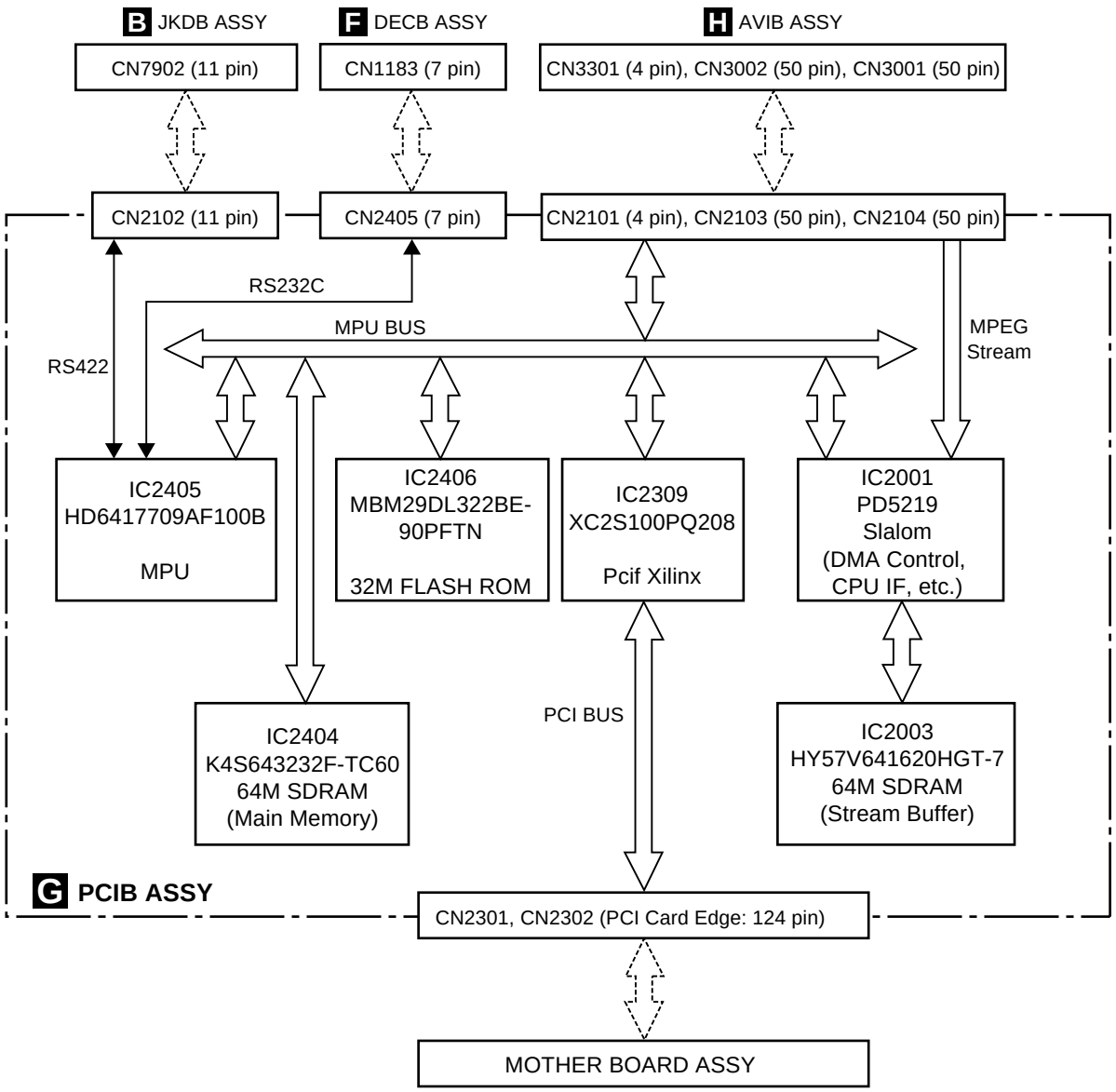
3.1.2 I/O BLOCK


A JKIB ASSY
B JKDB ASSY
C 422IB ASSY
D HPVB ASSY
E JKOB ASSY
JA7401
JA7402
JA7403
JA7601
JA7961
JA7404
JA7854
JA7852
JA7853
JA7855
JA7851
JA7981
JA661
6dB
AMP
Thru
CLAMP
AMP(Beta)
AMP(SMPTE)
V Select
A Select
Beta/SMPTE
CN7611
CN7402
CN7801
CN7851
CN7802
CN7701
CN661
IC7803
LTR/SQZ
P/I
Y/Cb/Cr
Y/C
CV
SPDIF
MUTE
+5V
+9V
+9V
-9V
CN7613
S7941
JA7941
SYNC SEP.
CN7941
Ex Sync
LTC
COMP
CN7902
CN7901
422 DRV/RCV
CN7903
CN7952
CN7951
H CN3501
H CN4001
F CN1811
H CN3202
F CN1471
G CN2102

3.1.3 DECB ASSY

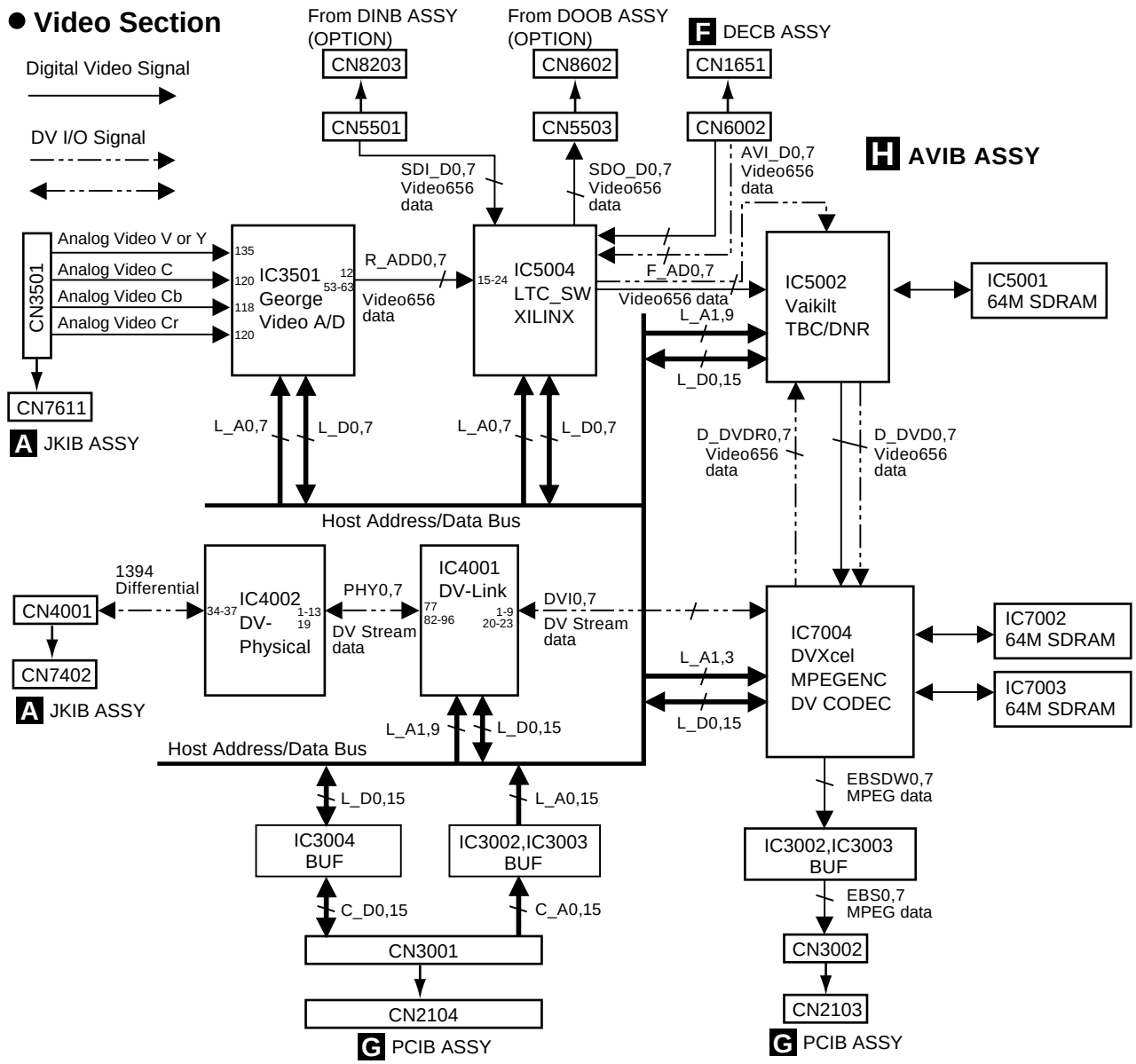


3.1.4 PCIB ASSY

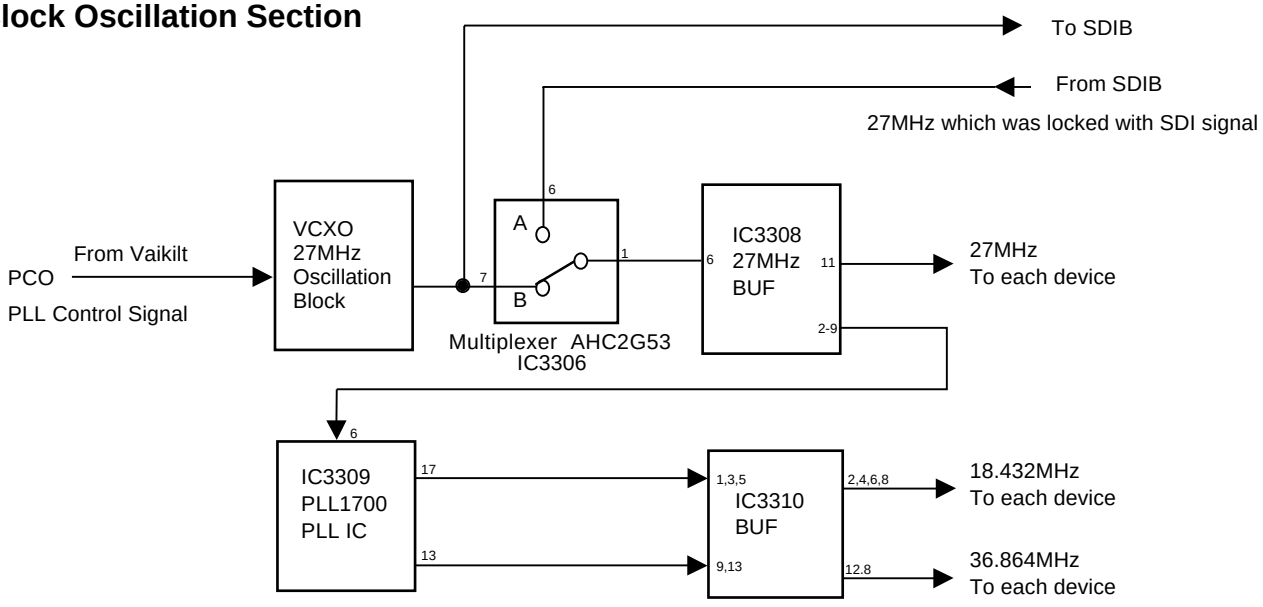

B JKDB ASSY
F DECB ASSY
H AVIB ASSY
CN7902 (11 pin)
CN1183 (7 pin)
CN3301 (4 pin), CN3002 (50 pin), CN3001 (50 pin)
CN2102 (11 pin)
CN2405 (7 pin)
CN2101 (4 pin), CN2103 (50 pin), CN2104 (50 pin)
RS232C
MPU BUS
RS422
MPEG Stream
IC2405 HD6417709AF100B MPU
IC2406 MBM29DL322BE-90PFTN 32M FLASH ROM
IC2309 XC2S100PQ208 Pcif Xilinx
IC2001 PD5219 Slalom (DMA Control, CPU IF, etc.)
PCI BUS
IC2404 K4S643232F-TC60 64M SDRAM (Main Memory)
IC2003 HY57V641620HGT-7 64M SDRAM (Stream Buffer)
G PCIB ASSY
CN2301, CN2302 (PCI Card Edge: 124 pin)
MOTHER BOARD ASSY

3.1.5 AVIB ASSY

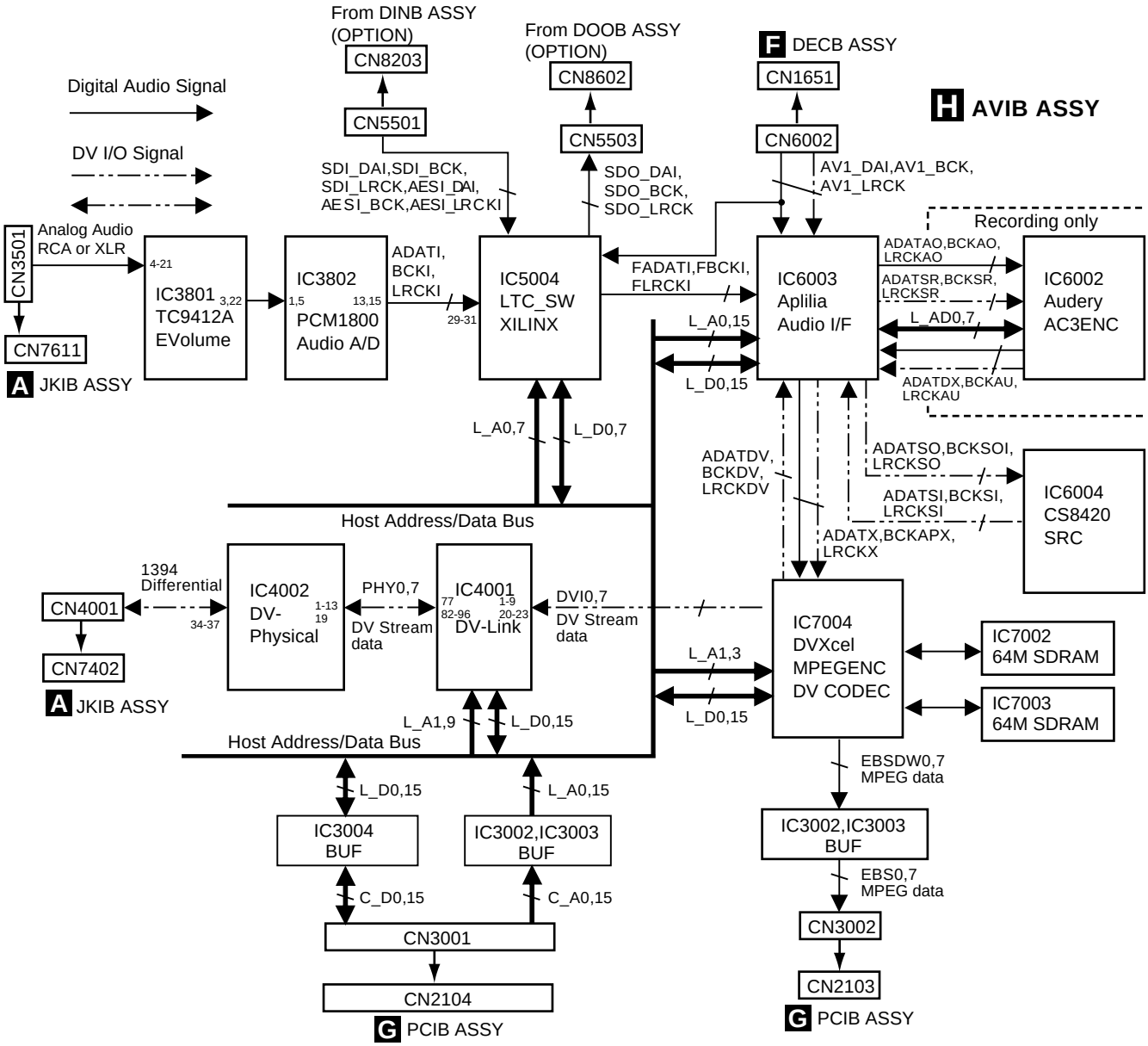
● Video Section



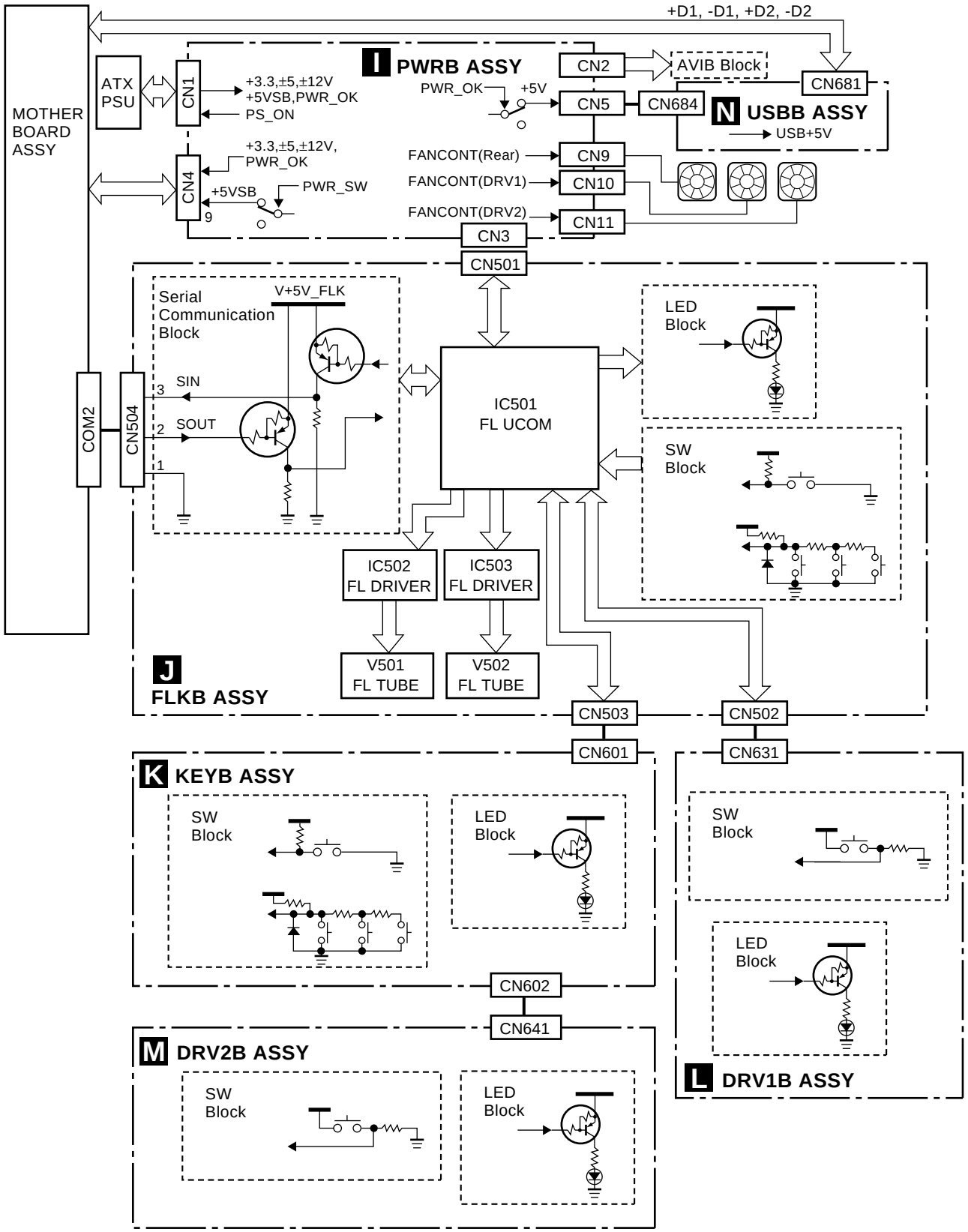
● Clock Oscillation Section



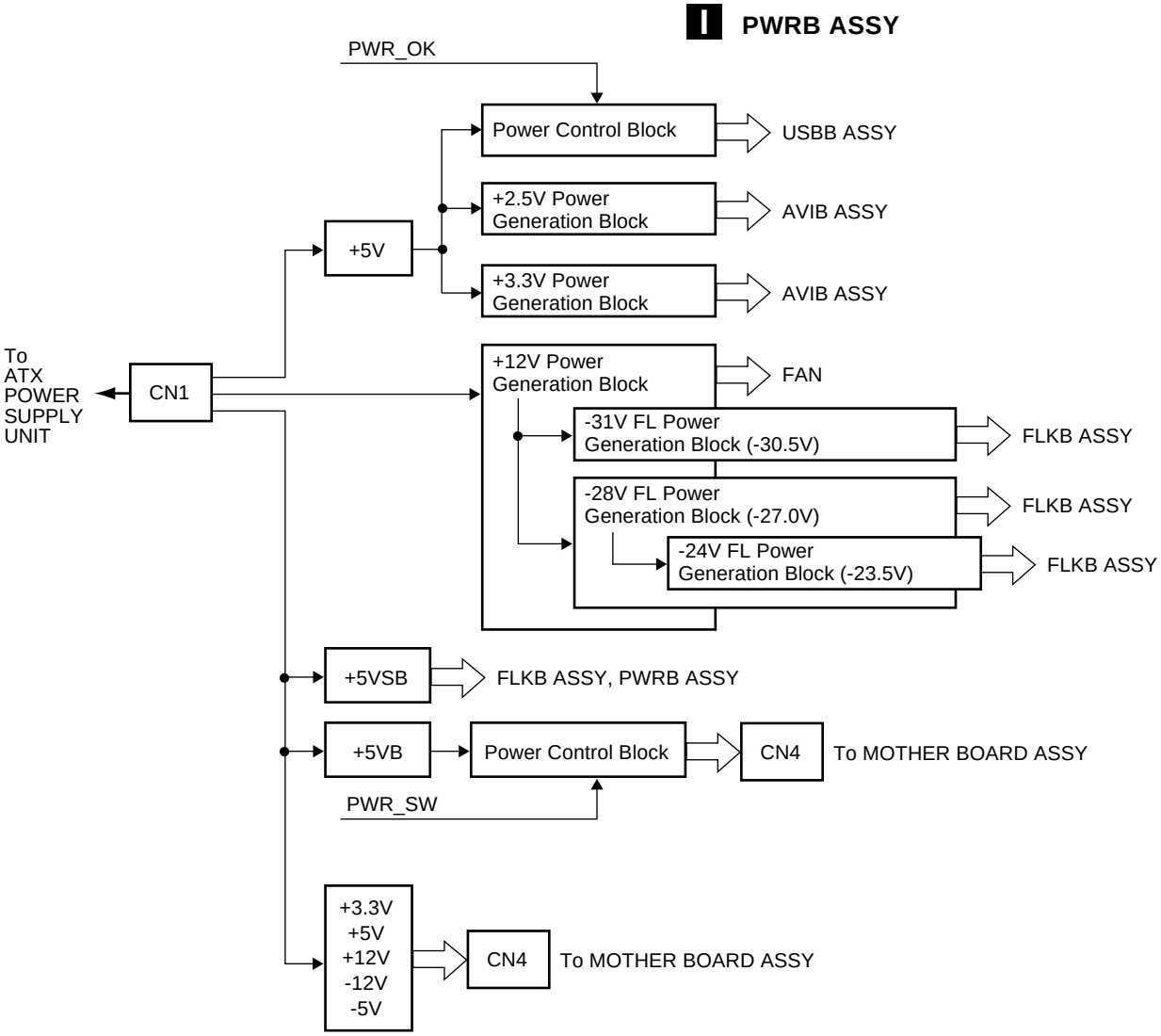
● Audio Section

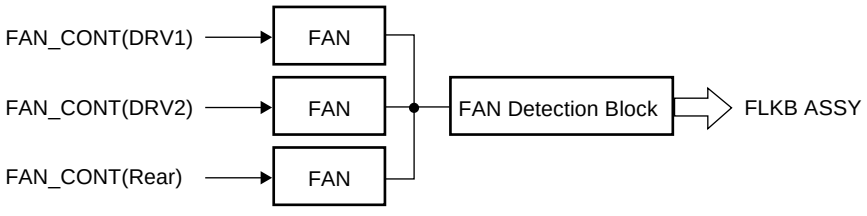


3.1.6 PWRB, FLKB, KEYB, DRV1B, DRV2B and USBB ASSYS



3.1.7 PWRB ASSY





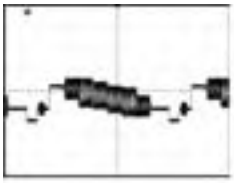
3.1.8 WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.

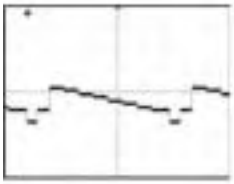
A JKIB ASSY

Measurement condition :
Video input (playback) signal : 75/0/75/0 color-bar
Audio input (playback) signal : 1kHz 0dB

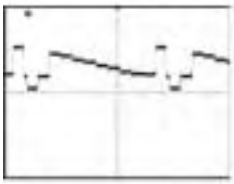
1 IC7409 - pin 7 (CVBS IN)
V: 1V/div. H: 10µsec/div.
A 1/3



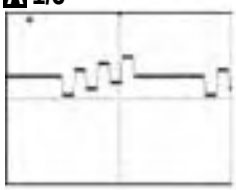
2 IC7409 - pin 7 (S-Y IN)
V: 1V/div. H: 10µsec/div.
A 1/3



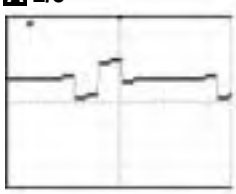
3 IC7413 - pin 7 (Y (Beta) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



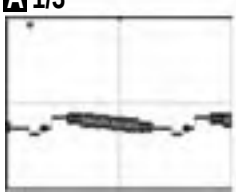
4 IC7419 - pin 7 (Cb (Beta) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



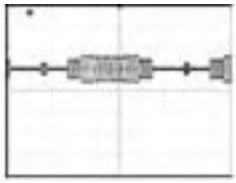
5 IC7420 - pin 7 (Cr (Beta) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



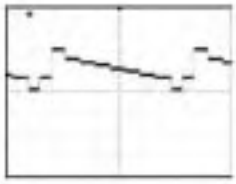
6 IC7404 - pin 7 (CV_THRU IN)
V: 1V/div. H: 10µsec/div.
A 1/3



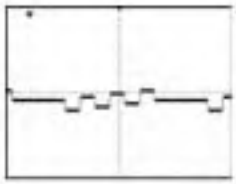
7 IC7403 - pin 7 (S-C IN)
V: 1V/div. H: 10µsec/div.
A 1/3



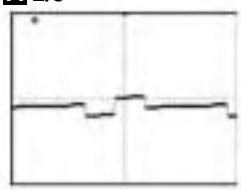
8 IC7413 - pin 1 (Y (SMPTE) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



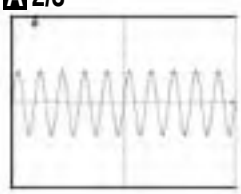
9 IC7419 - pin 1 (Cb (SMPTE) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



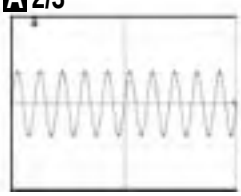
10 IC7420 - pin 1 (Cr (SMPTE) IN)
V: 1V/div. H: 10µsec/div.
A 1/3



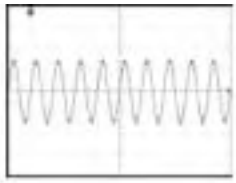
11 IC7613 - pin 1 (RCA_L IN)
V: 2V/div. H: 1msec/div.
A 2/3



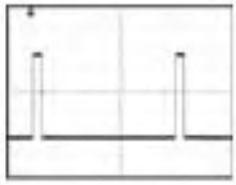
12 IC7613 - pin 7 (L_THRU IN)
V: 2V/div. H: 1msec/div.
A 2/3



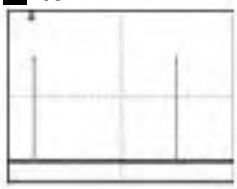
13 IC7621 - pin 1 (XLR_ch1 IN)
V: 2V/div. H: 1msec/div.
A 2/3



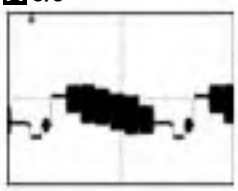
14 IC7401 - pin 3 (C SYNC)
V: 1V/div. H: 10µsec/div.
A 1/3



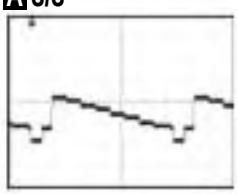
15 IC7402 - pin 5 (SYNC PULS)
V: 1V/div. H: 10µsec/div.
A 1/3



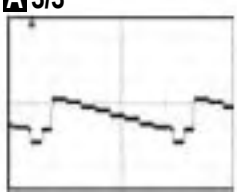
16 IC7803 - pin 33 (CVBS OUT)
V: 1V/div. H: 10µsec/div.
A 3/3



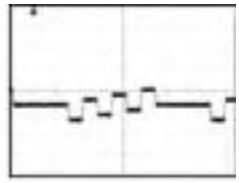
17 IC7803 - pin 28 (S-Y OUT)
V: 1V/div. H: 10µsec/div.
A 3/3



18 IC7803 - pin 25 (Y/G OUT)
V: 1V/div. H: 10µsec/div.
A 3/3

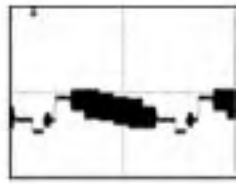


19 IC7803 - pin 23 (Cb/B OUT)
V: 1V/div. H: 10µsec/div.
A 3/3

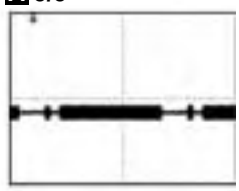


20 IC7803 - pin 21 (Cr/R OUT)
V: 1V/div. H: 10µsec/div.
A 3/3

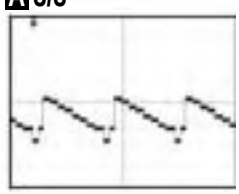
21 IC7803 - pin 33 (CV_THRU OUT)
V: 1V/div. H: 10µsec/div.
A 3/3



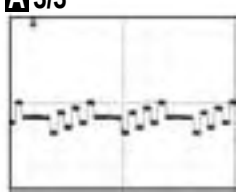
22 IC7803 - pin 31 (S-C OUT)
V: 1V/div. H: 10µsec/div.
A 3/3



23 IC7803 - pin 25 (Prog Y/G OUT)
V: 1V/div. H: 10µsec/div.
A 3/3



24 IC7803 - pin 23 (Prog Cb/B OUT)
V: 1V/div. H: 10µsec/div.
A 3/3

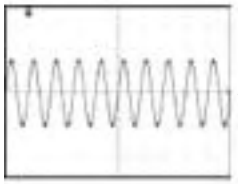


B JKDB ASSY

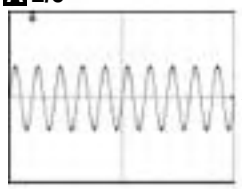
D HPVB ASSY

25 **IC7803 - pin 21 (Prog Cr/R OUT)**
V: 1V/div. H: 10µsec/div.
A 3/3

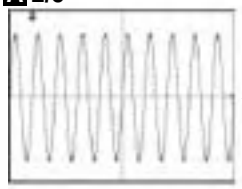
26 **IC7703 - pin 7 (RCA_L OUT)**
V: 2V/div. H: 1msec/div.
A 2/3



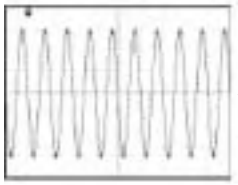
27 **IC7703 - pin 7 (L_THRU OUT)**
V: 2V/div. H: 1msec/div.
A 2/3



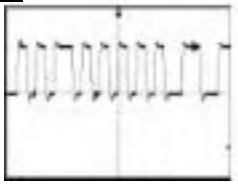
28 **IC7709 - pin 1 (XLR_1ch_ H OUT)**
V: 2V/div. H: 1msec/div.
A 2/3



29 **IC7709 - pin 7 (XLR_1ch_C OUT)**
V: 2V/div. H: 1msec/div.
A 2/3

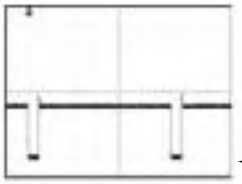


30 **CN7802 - pin 29 (SPDIF OUT)**
V: 0.5V/div. H: 400nsec/div.
A 3/3

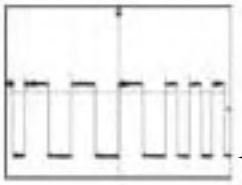


1 **JA7941 - pin 5 (BlackBurst IN)**
V: 1V/div. H: 10µsec/div.

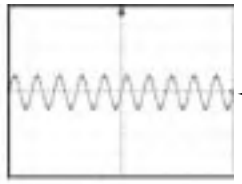
2 **CN7941 - pin 1 (SIG)**
V: 1V/div. H: 10µsec/div.



4 **IC7921 - pin 11 (LTC)**
V: 1V/div. H: 400µsec/div.



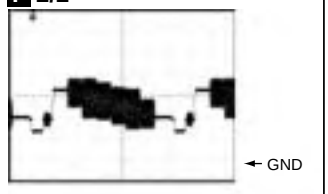
1 **JA661 - pin 3 (HP_L OUT)**
V: 2V/div. H: 1msec/div.



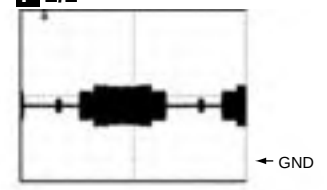
F DECB ASSY

Measurement condition :
Video input (playback) signal : 75/0/75/0 color-bar
Audio input (playback) signal : 1kHz 0dB

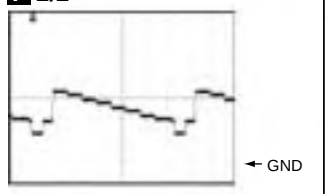
1 CN1811 - pin 8 (CVBS)
V: 0.5V/div. H: 10µsec/div.



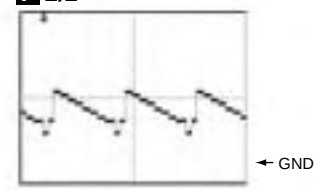
7 CN1811 - pin 10 (S-C)
V: 0.5V/div. H: 10µsec/div.



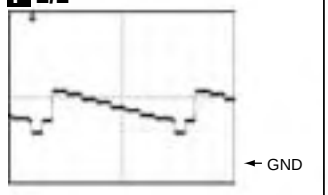
2 CN1811 - pin 12 (S-Y)
V: 0.5V/div. H: 10µsec/div.



8 CN1811 - pin 16 (Y prog)
V: 0.5V/div. H: 10µsec/div.

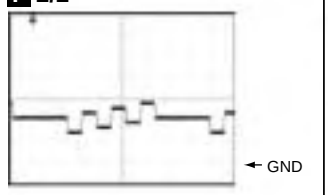


3 CN1811 - pin 16 (Y)
V: 0.5V/div. H: 10µsec/div.

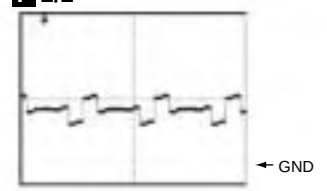


9 CN1811 - pin 18 (Cb prog)
V: 0.5V/div. H: 10µsec/div.

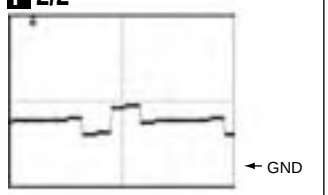
4 CN1811 - pin 18 (Cb)
V: 0.5V/div. H: 10µsec/div.



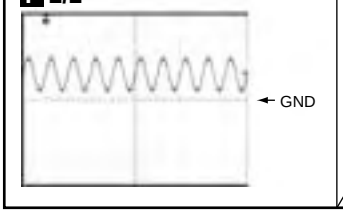
10 CN1811 - pin 20 (Cr prog)
V: 0.5V/div. H: 10µsec/div.



5 CN1811 - pin 20 (Cr)
V: 0.5V/div. H: 10µsec/div.

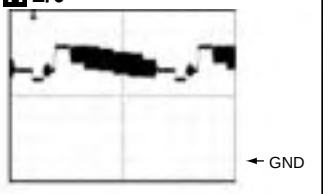


6 CN1611 - pin 23 (Lch)
V: 2V/div. H: 1msec/div.

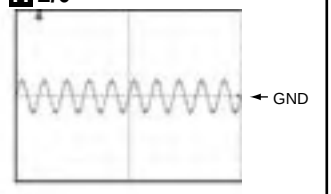


H AVIB ASSY

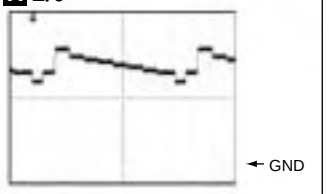
1 CN3501 - pin 7 (CVBS)
V: 1V/div. H: 10µsec/div.



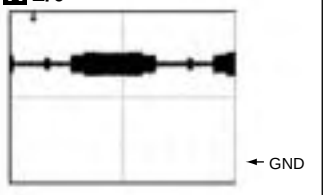
7 CN3502 - pin 2 (Lch)
V: 2V/div. H: 1msec/div.



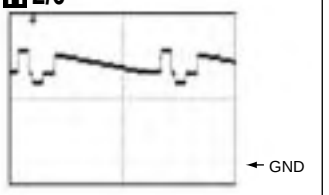
2 CN3501 - pin 7 (S-Y)
V: 1V/div. H: 10µsec/div.



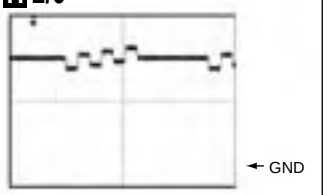
3 CN3501 - pin 9 (S-C)
V: 1V/div. H: 10µsec/div.



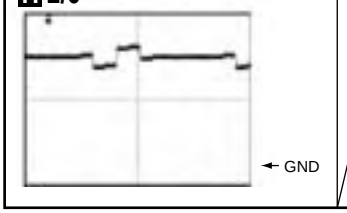
4 CN3501 - pin 7 (Y beta/SMPTE)
V: 1V/div. H: 10µsec/div.



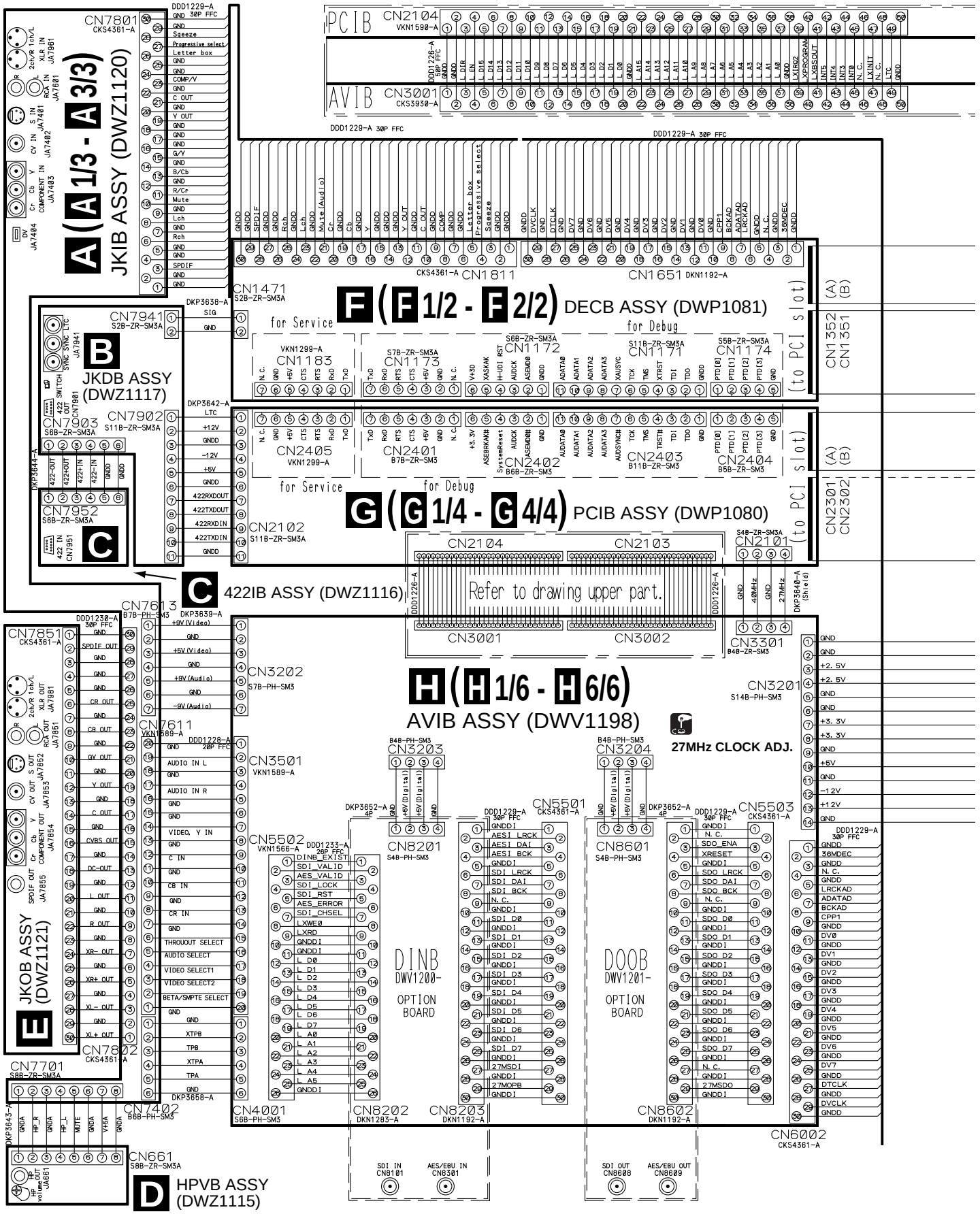
5 CN3501 - pin 11 (Cb Beta/SMPTE)
V: 1V/div. H: 10µsec/div.



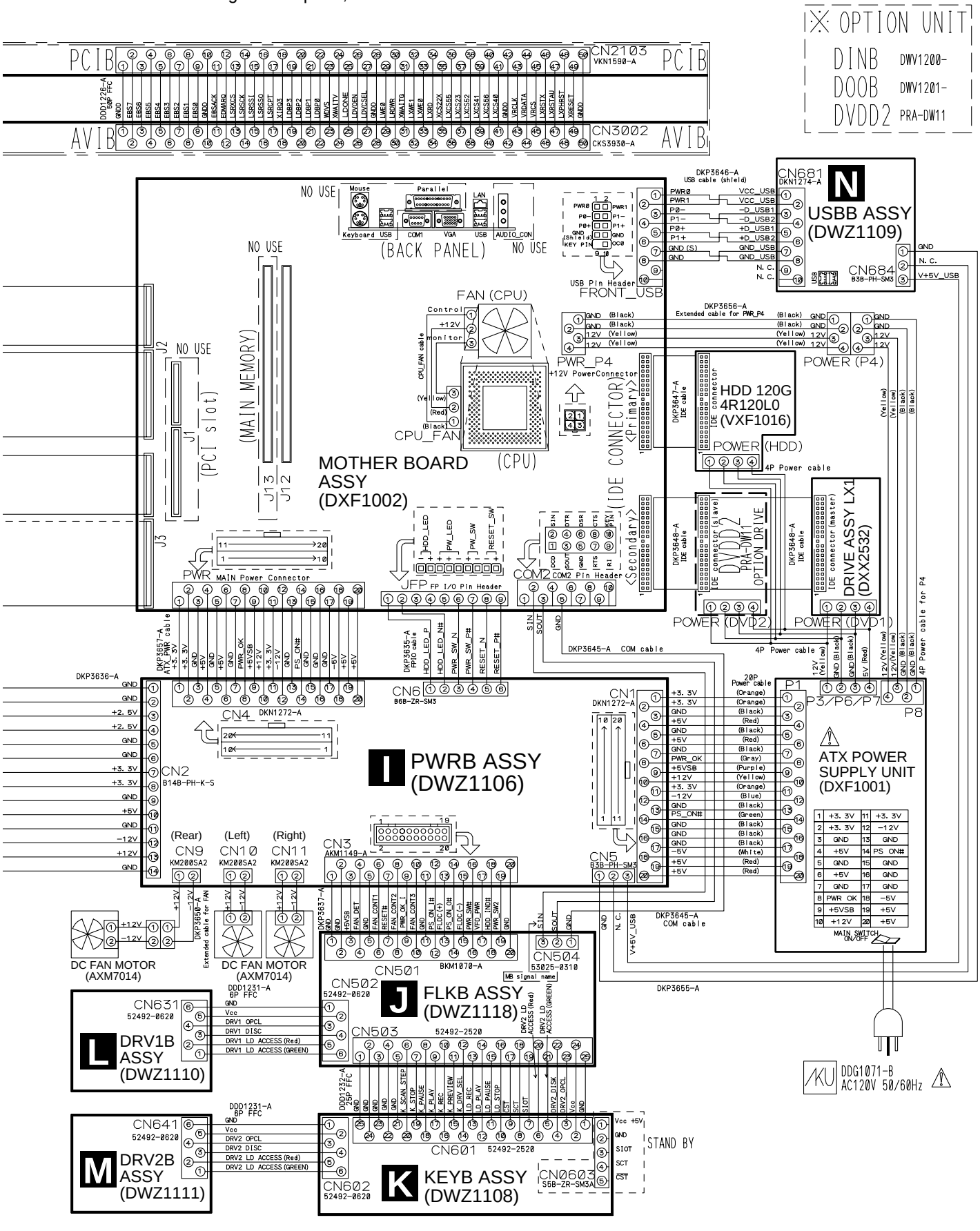
6 CN3501 - pin 13 (Cr Beta/SMPTE)
V: 1V/div. H: 10µsec/div.



3.2 OVERALL WIRING DIAGRAM

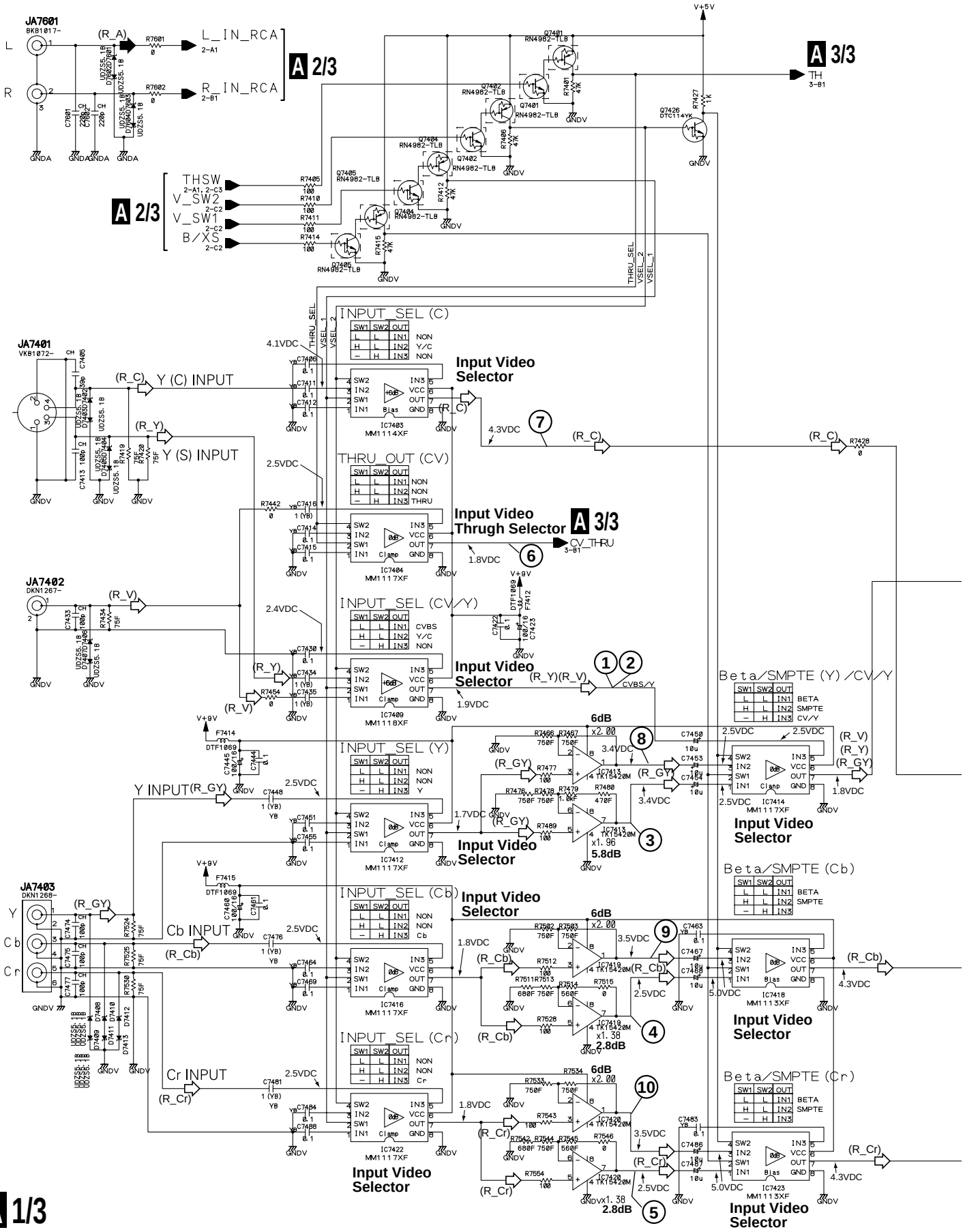

A (A 1/3 - A 3/3) JKIB ASSY (DWZ1120)
B JKDB ASSY (DWZ1117)
C 422IB ASSY (DWZ1116)
D HPVB ASSY (DWZ1115)
E JKOB ASSY (DWZ1121)
F (F 1/2 - F 2/2) DECB ASSY (DWP1081)
G (G 1/4 - G 4/4) PCIB ASSY (DWP1080)
H (H 1/6 - H 6/6) AVIB ASSY (DWV1198)
27MHz CLOCK ADJ.
DINB DWV1200- OPTION BOARD
DOOB DWV1201- OPTION BOARD
Refer to drawing upper part.
(to PCI slot)

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



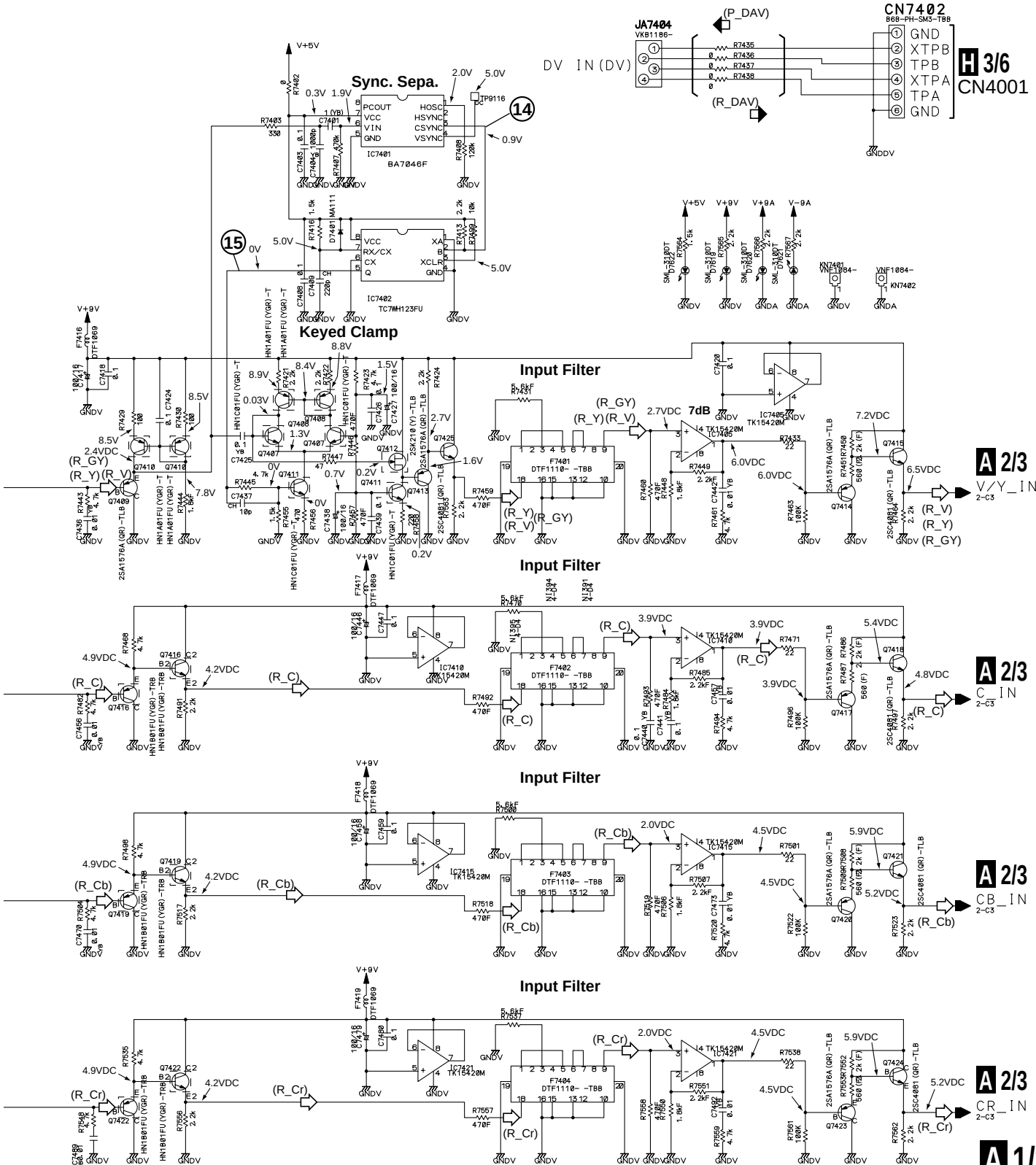
3.3 JKIB ASSY (1/3)

A 1/3 JKIB ASSY (DWZ1120)



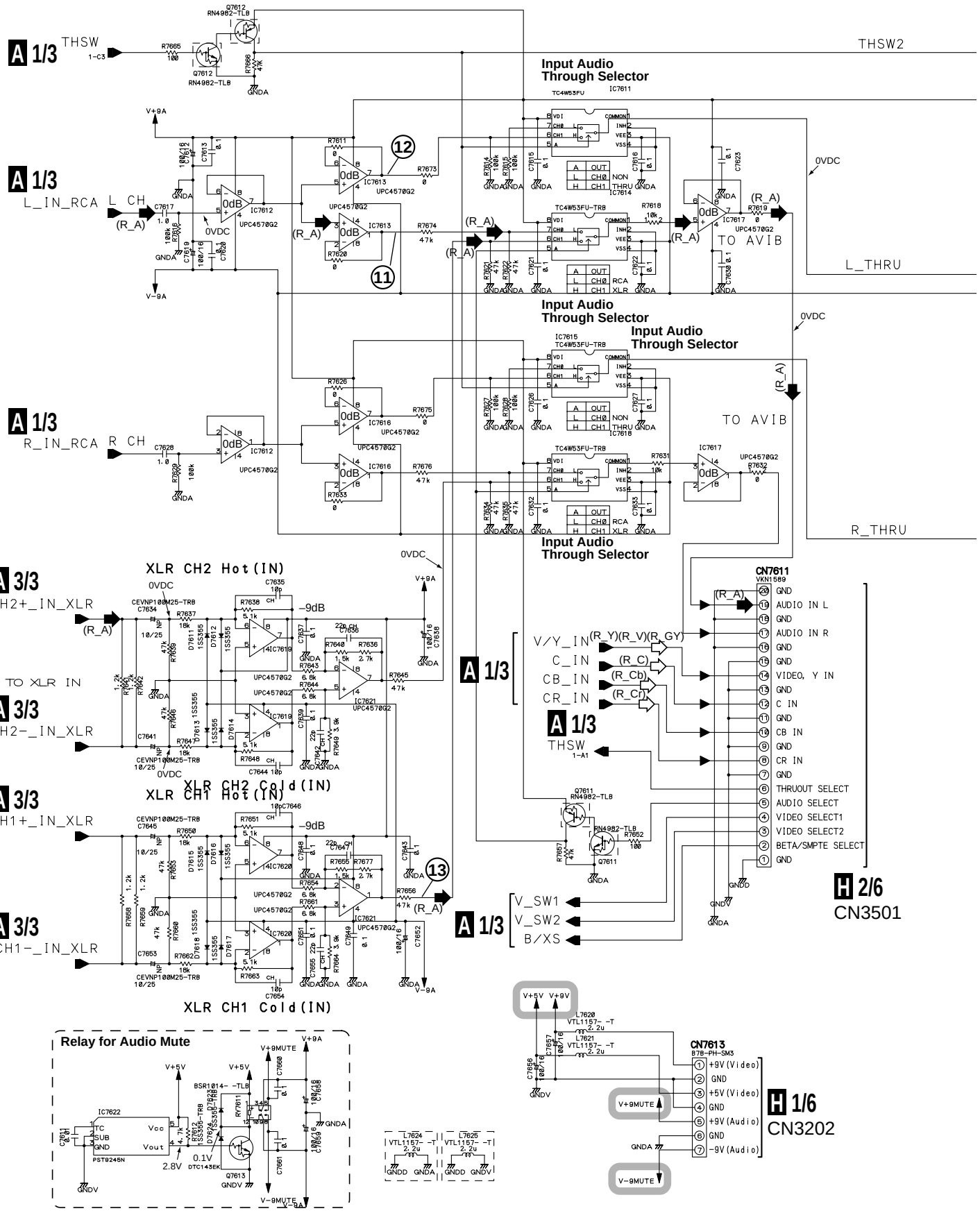
(R_V): Recording Signal Route (Composite Video)
(R_Y): Recording Signal Route (S-Video_Y)
(R_C): Recording Signal Route (S-Video_C)
(R_GY): Recording Signal Route (Component_Y)
(R_Cb): Recording Signal Route (Component_Cb)
(R_Cr): Recording Signal Route (Component_Cr)

(R_A): Recording Signal Route (Analog Audio L ch)
(R_DAV): Recording Signal Route (Digital Audio/Video)
(P_DAV): Playback Signal Route (Digital Audio/Video)



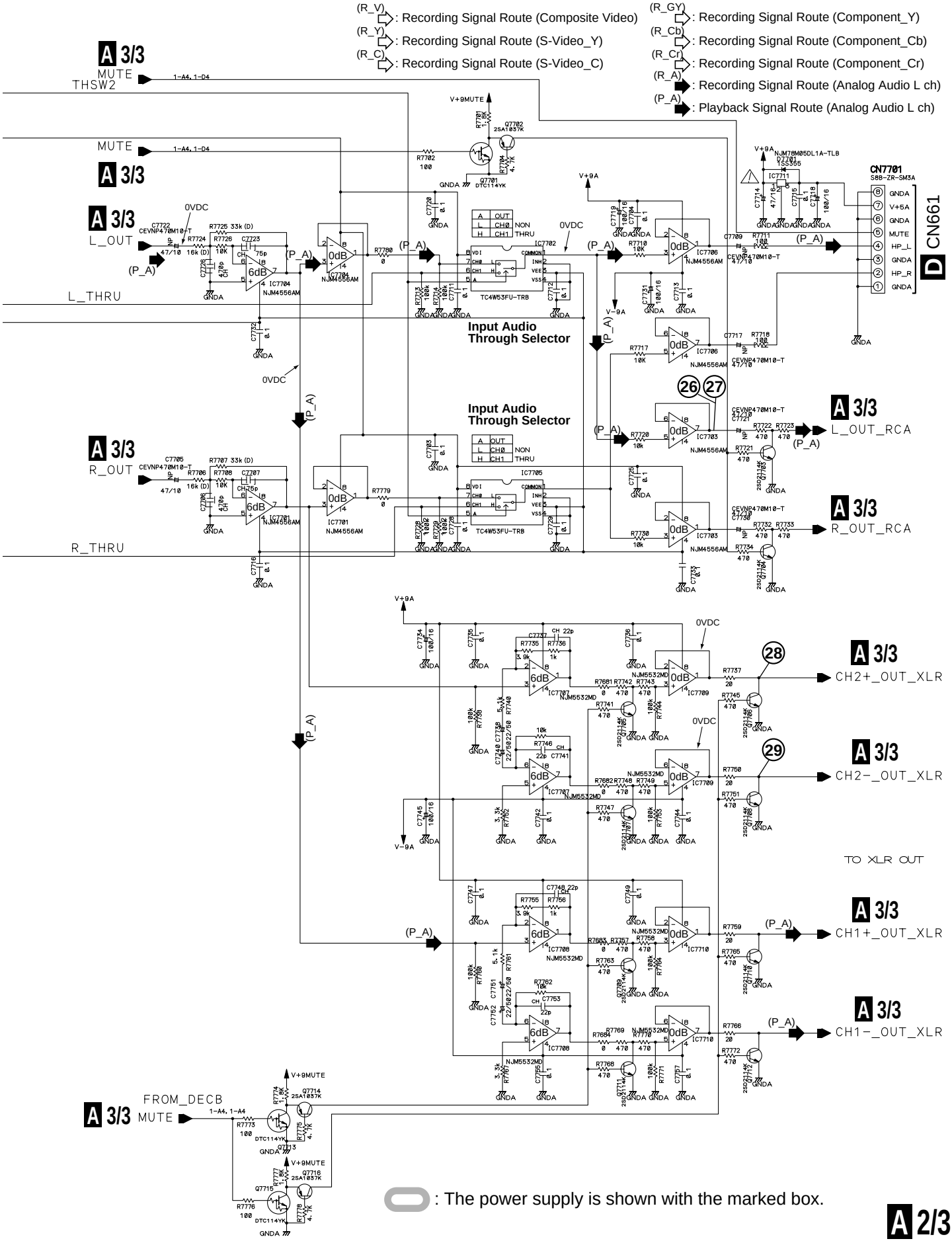
3.4 JKIB ASSY (2/3)

A 2/3 JKIB ASSY (DWZ1120)



A 2/3

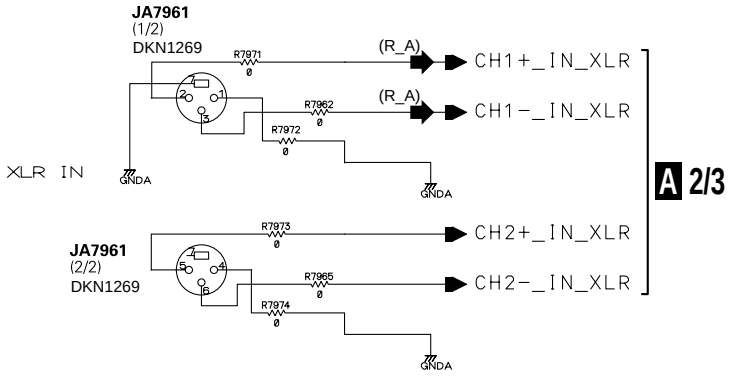
(R_V): Recording Signal Route (Composite Video)
(R_Y): Recording Signal Route (S-Video_Y)
(R_C): Recording Signal Route (S-Video_C)
(R_GY): Recording Signal Route (Component_Y)
(R_Cb): Recording Signal Route (Component_Cb)
(R_Cr): Recording Signal Route (Component_Cr)
(R_A): Recording Signal Route (Analog Audio L ch)
(P_A): Playback Signal Route (Analog Audio L ch)

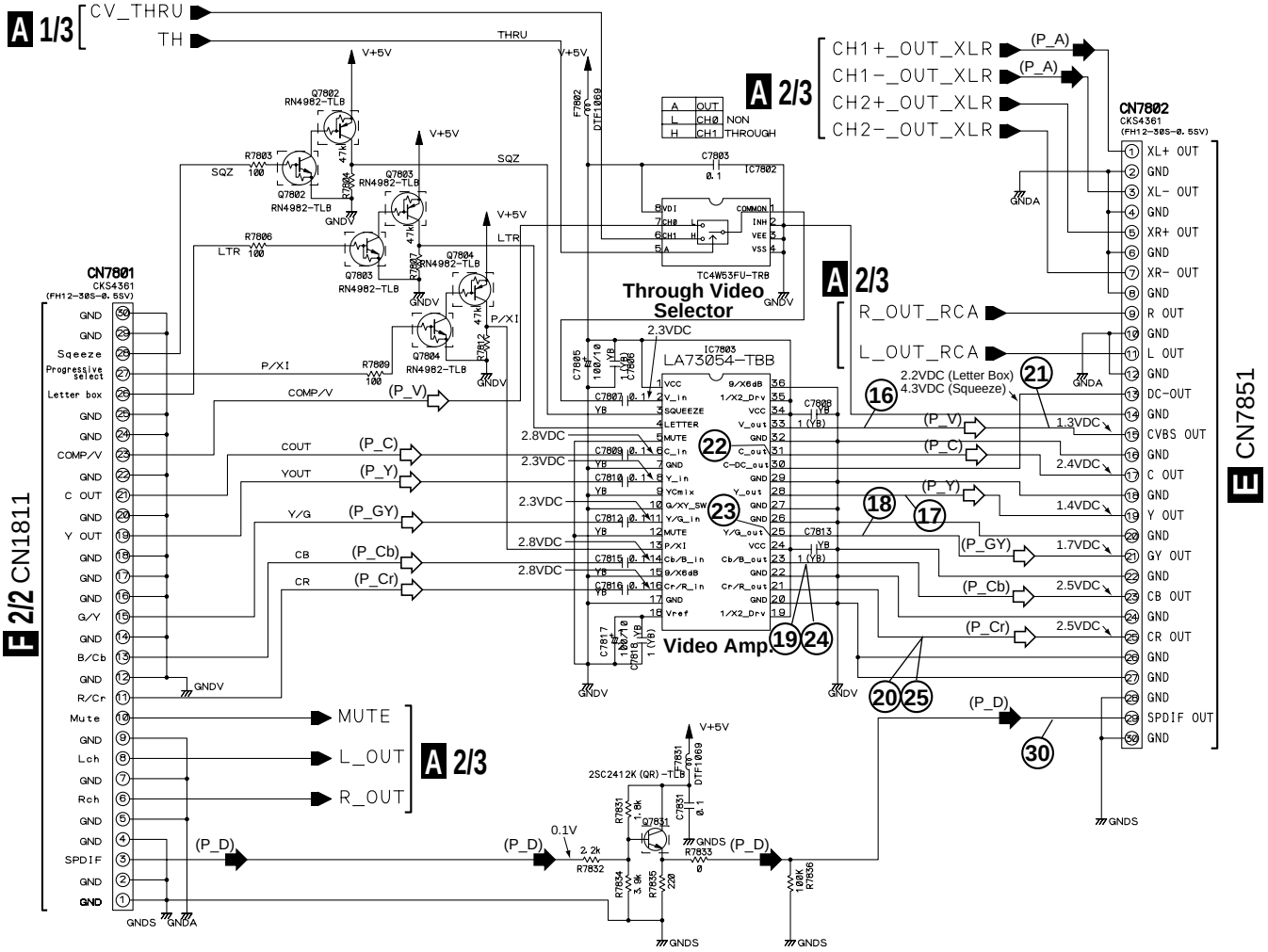


3.5 JKIB ASSY (3/3)

A 3/3 JKIB ASSY (DWZ1120)

(P_V): Playback Signal Route (Composite Video)
(P_Y): Playback Signal Route (S-Video_Y)
(P_C): Playback Signal Route (S-Video_C)
(P_GY): Recording Signal Route (Component_Y)
(P_Cb): Playback Signal Route (Component_Cb)
(P_Cr): Playback Signal Route (Component_Cr)
(R_A): Recording Signal Route (Analog Audio L ch)
(P_A): Playback Signal Route (Analog Audio L ch)
(P_D): Playback Signal Route (Digital Audio)





A

B

C

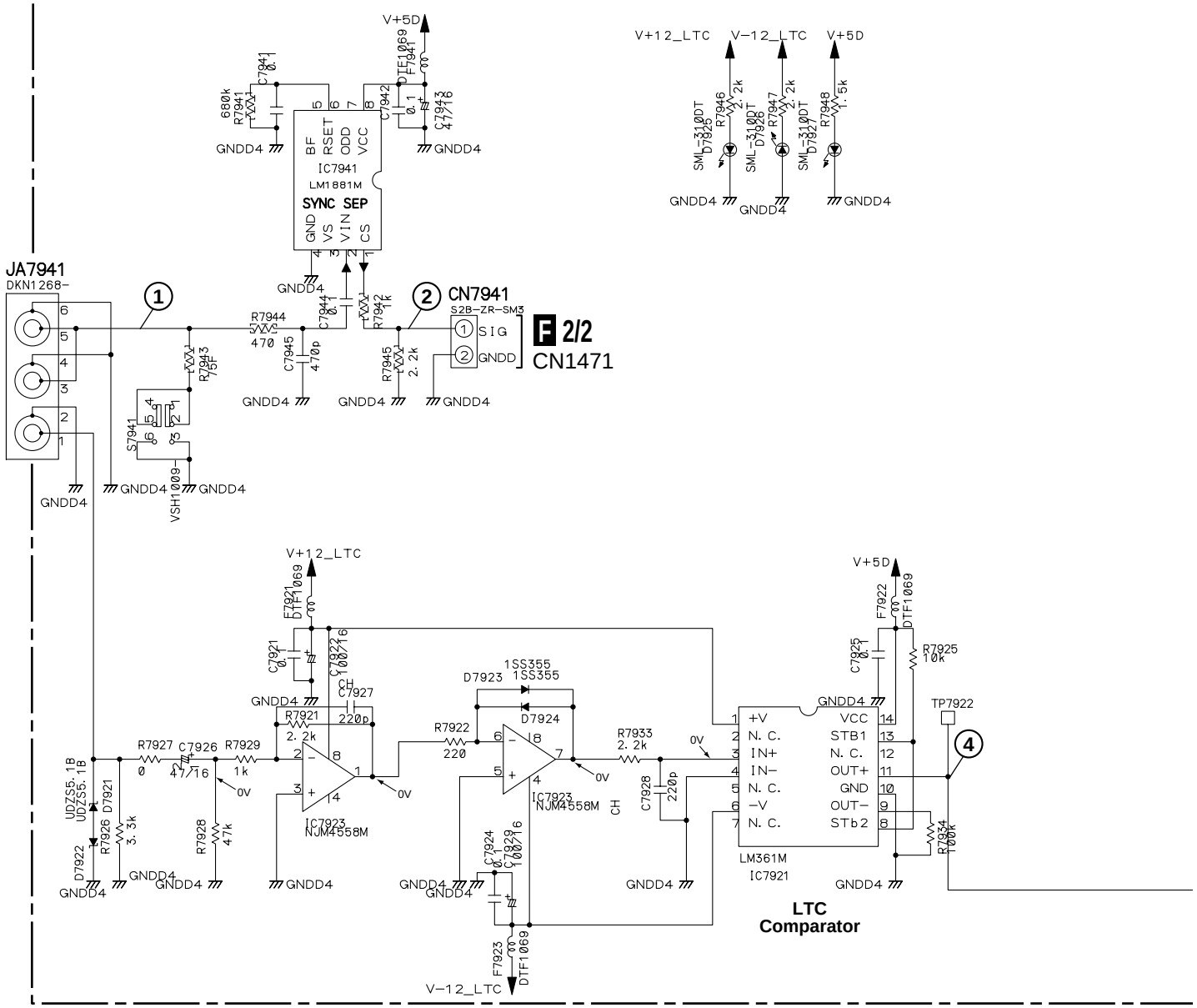
D

E

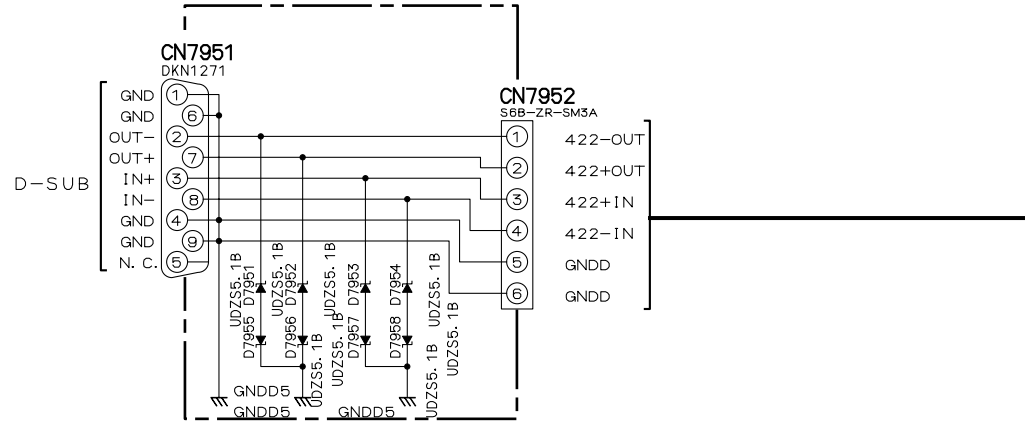
F

3.6 JKDB and 422IB ASSYS

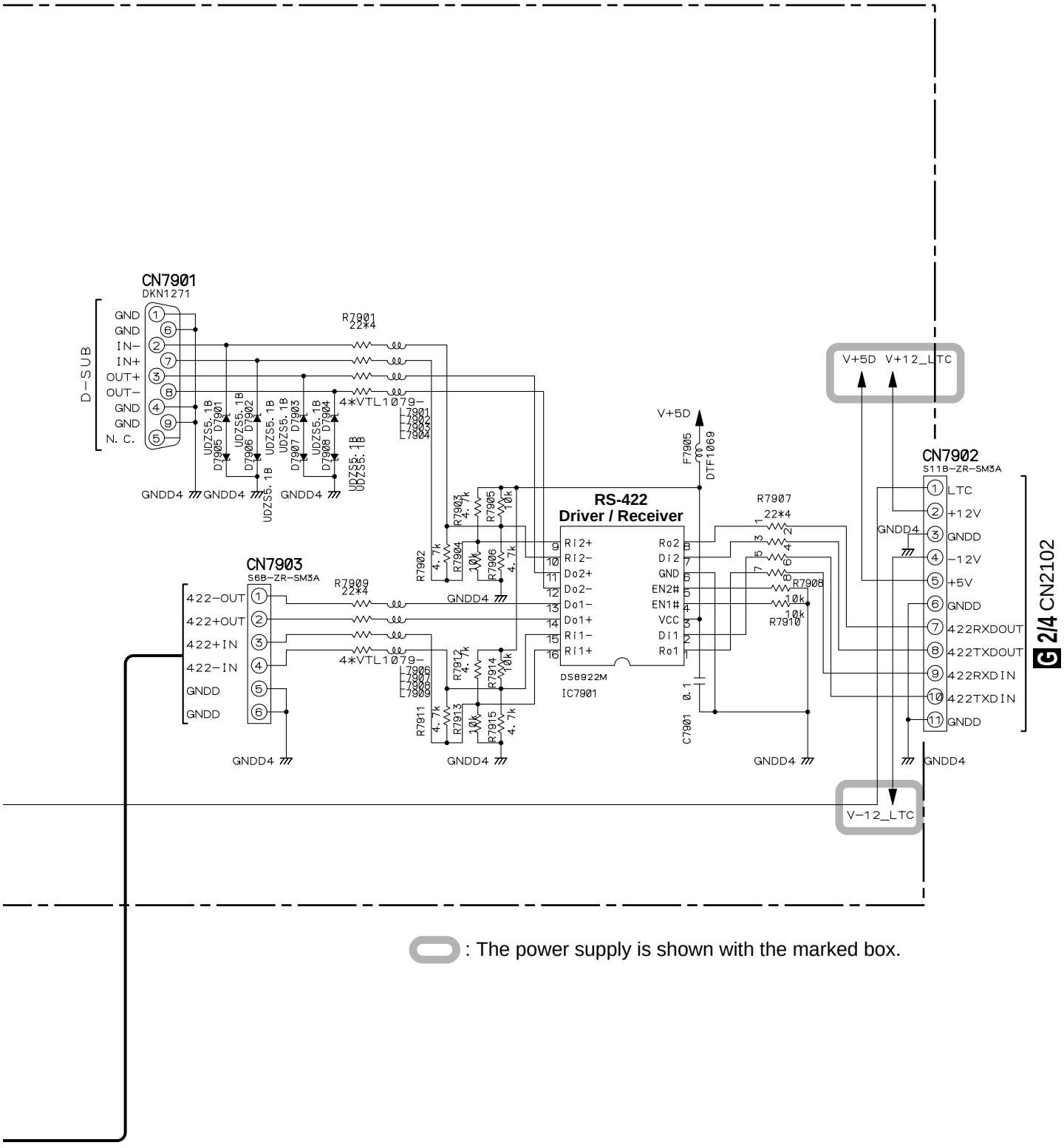
B JKDB ASSY (DWZ1117)



C 422IB ASSY (DWZ1116)

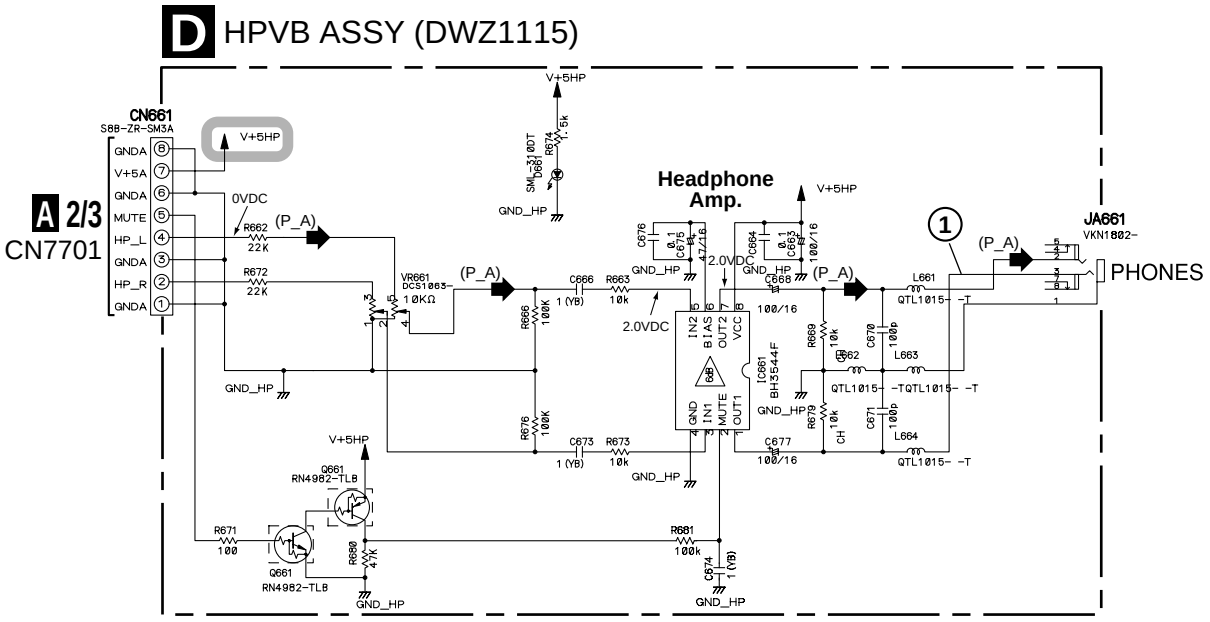


B C



: The power supply is shown with the marked box.

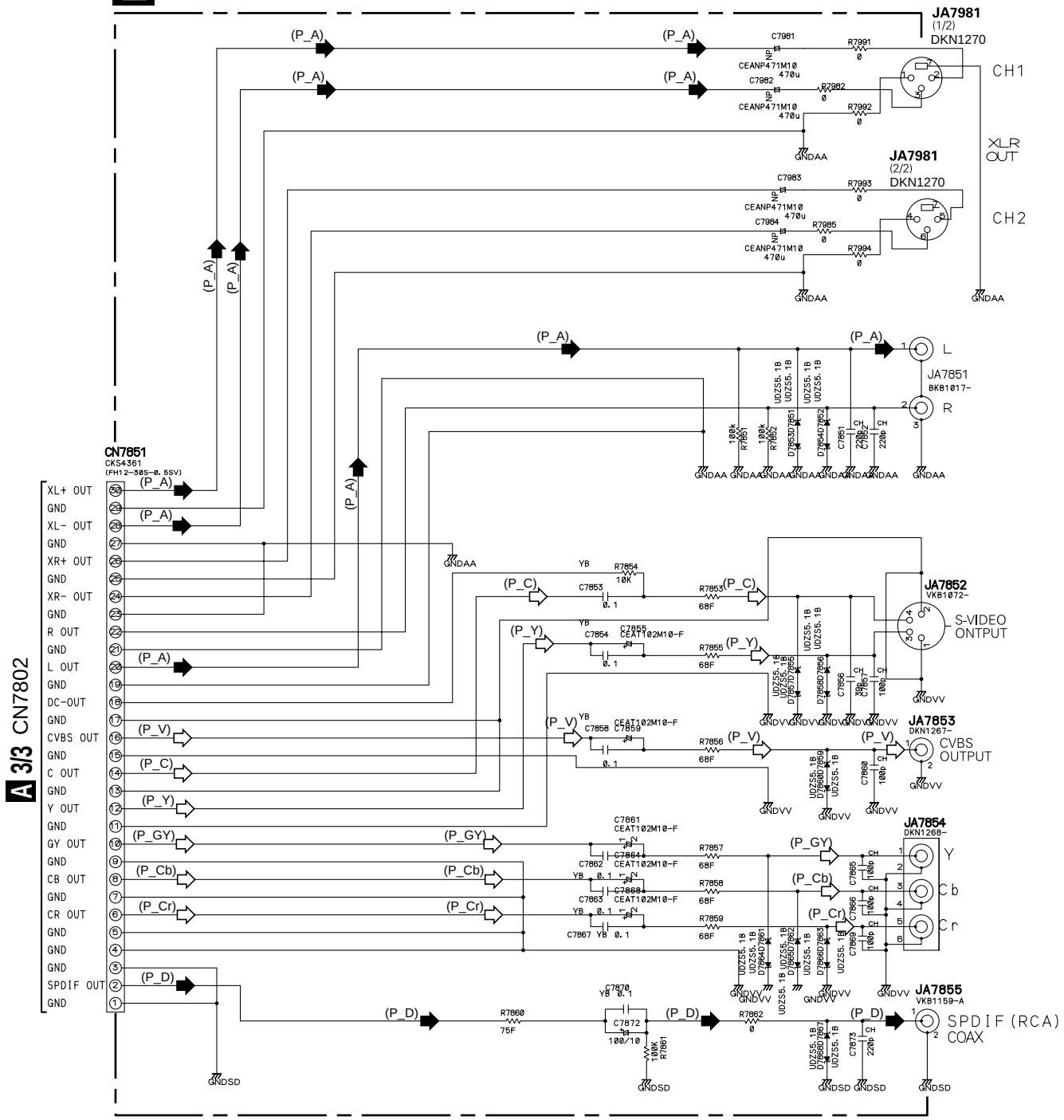
3.7 HPVB and JKOB ASSYS



: The power supply is shown with the marked box.

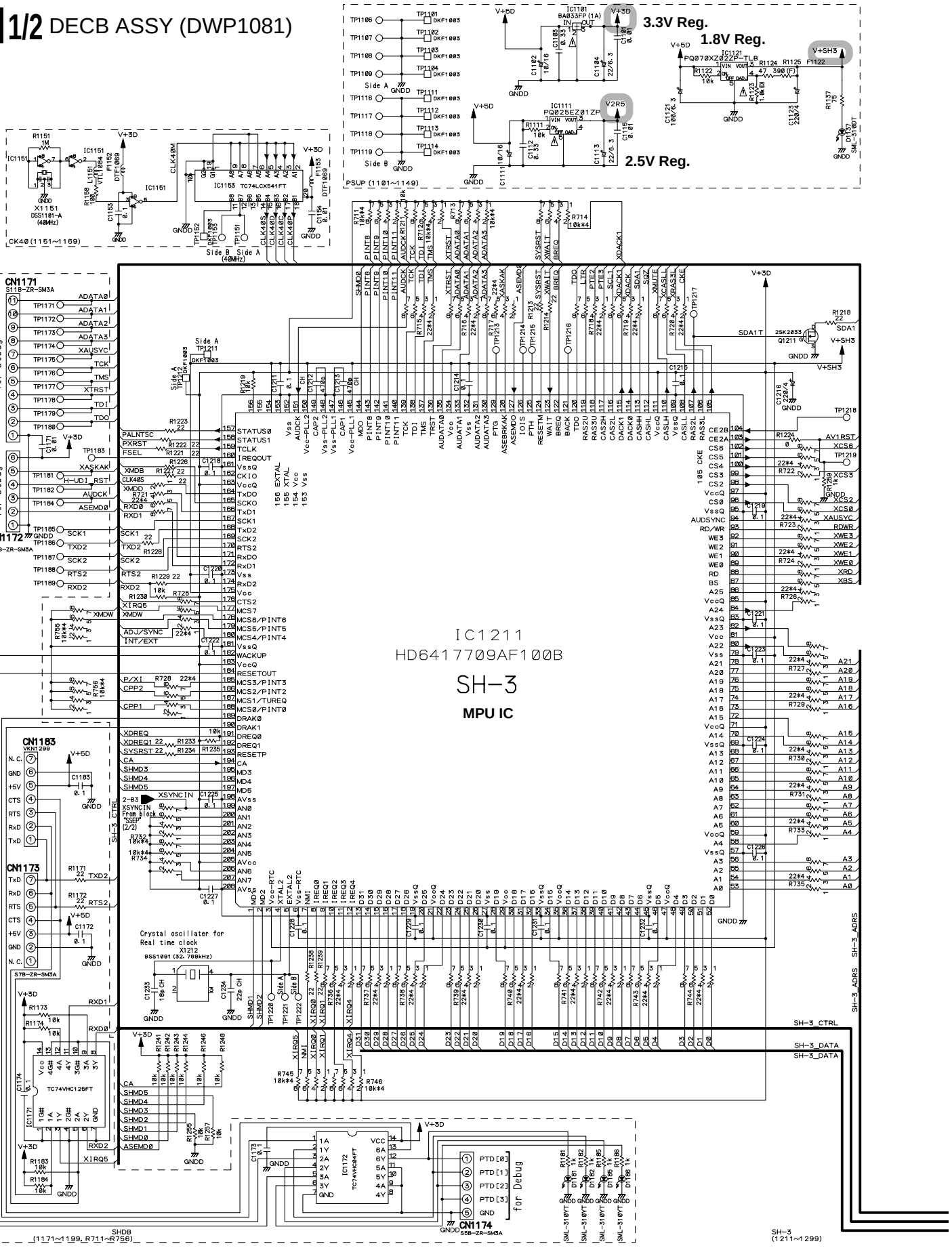
(P_V) : Playback Signal Route (Composite Video)
(P_Y) : Playback Signal Route (S-Video_Y)
(P_C) : Playback Signal Route (S-Video_C)
(P_GY) : Playback Signal Route (Component_Y)
(P_Cb) : Playback Signal Route (Component_Cb)
(P_Cr) : Playback Signal Route (Component_Cr)
(P_A) : Playback Signal Route (Analog Audio L ch)
(P_D) : Playback Signal Route (Digital Audio)

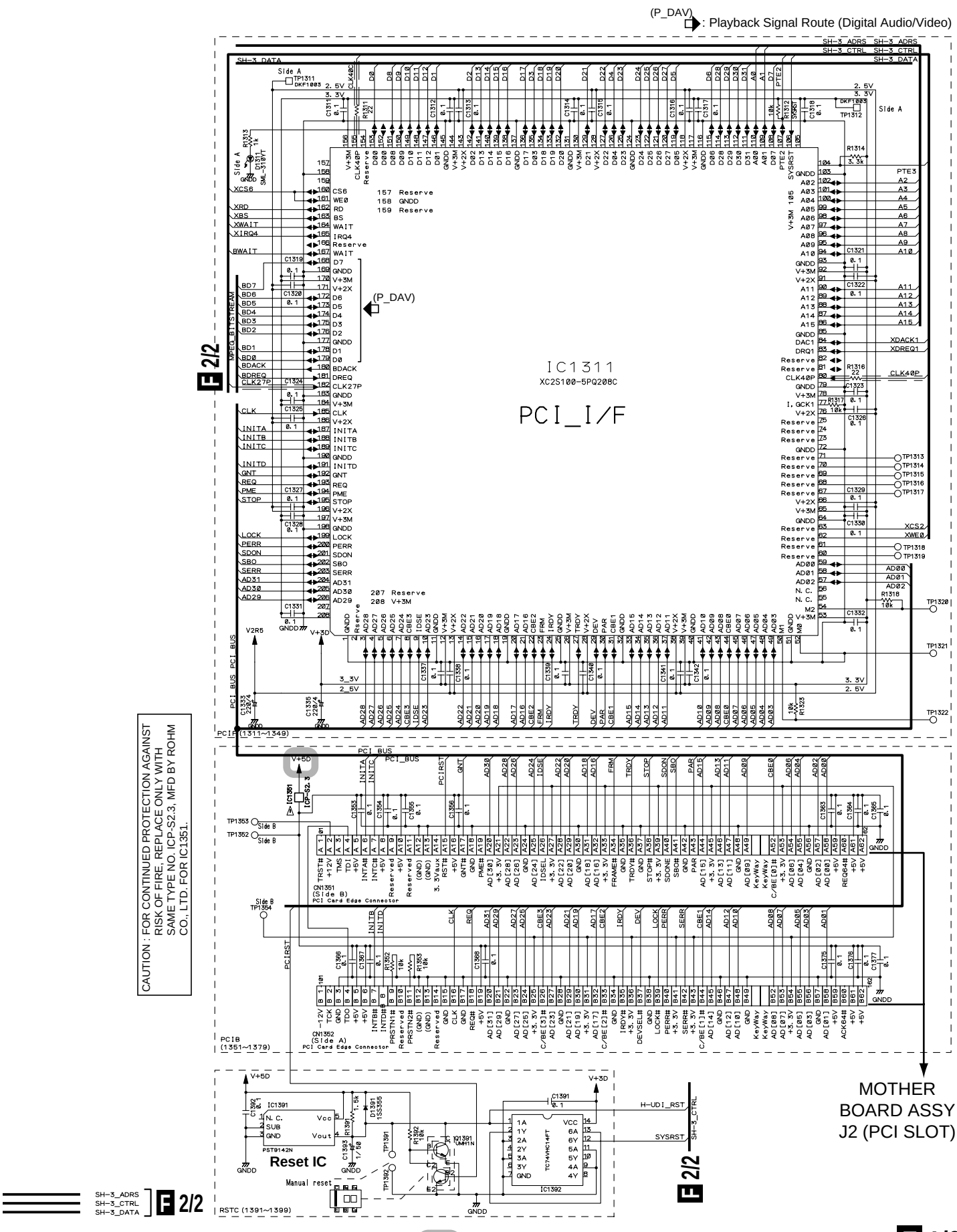
E JKOB ASSY (DWZ1121)



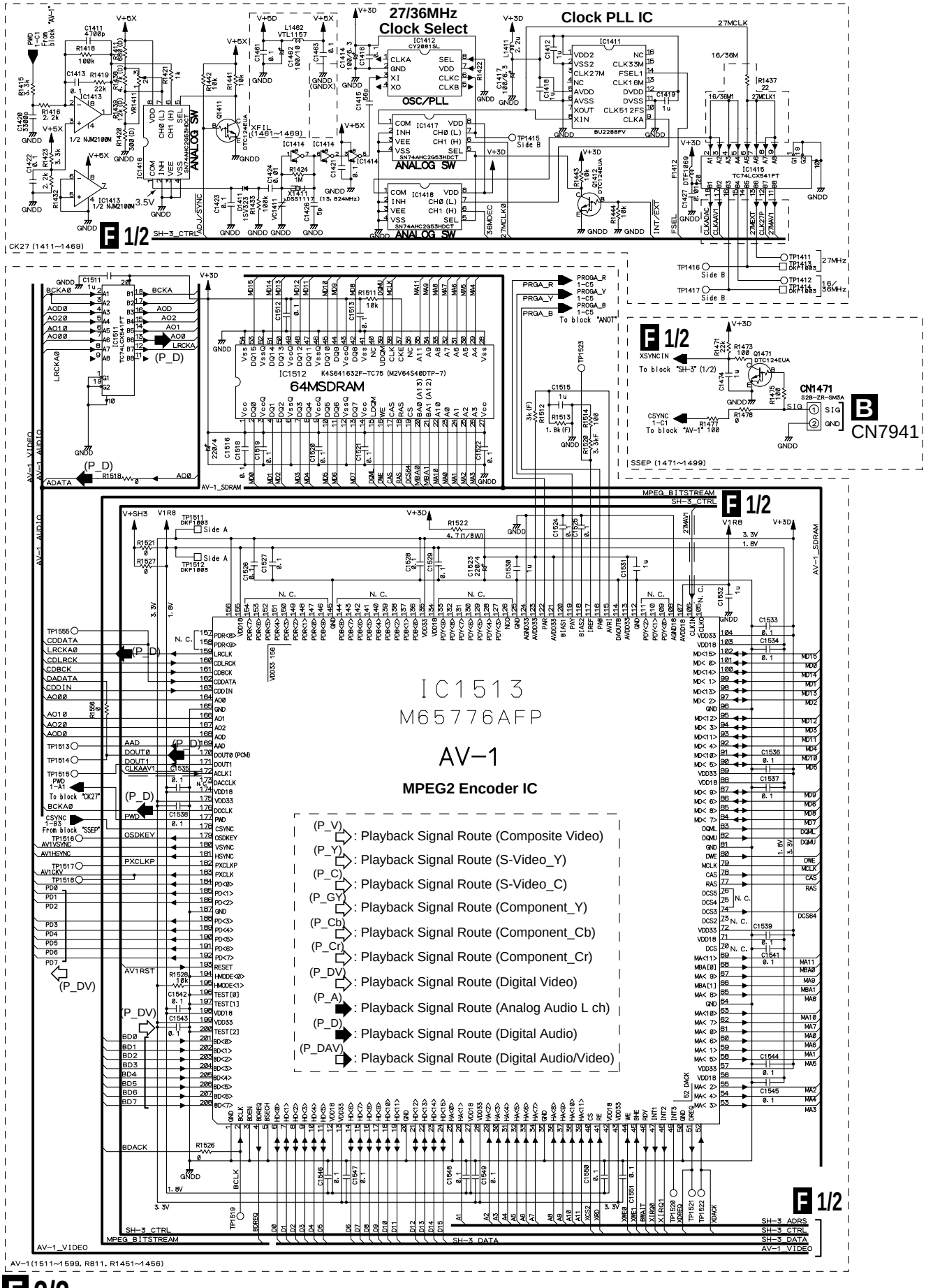
3.8 DECB ASSY (1/2)

F 1/2 DECB ASSY (DWP1081)

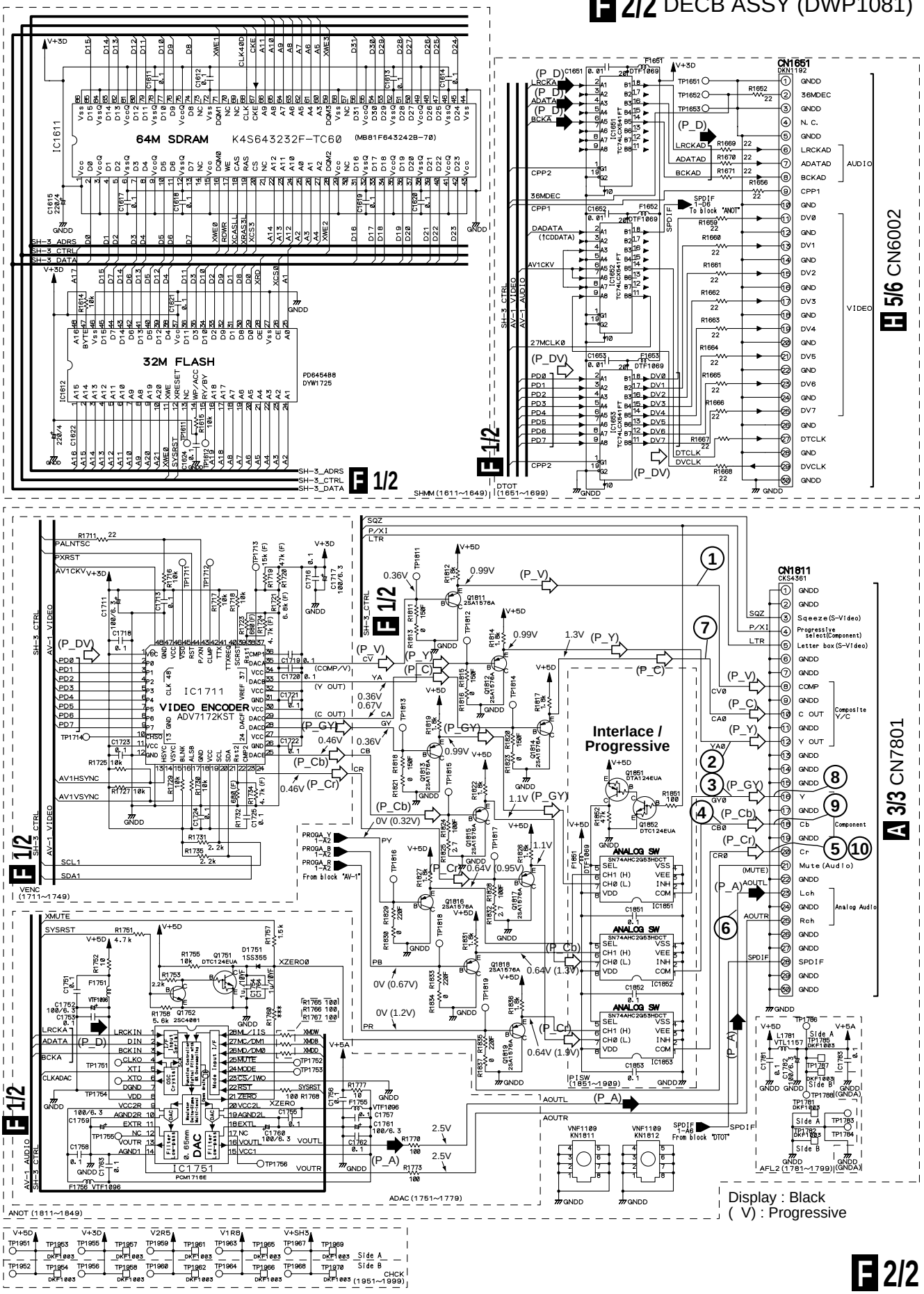



(P_DAV): Playback Signal Route (Digital Audio/Video)
IC1311
XC2S100-5PQ208C
PCI_I/F
F 2/2
PCIF (1311~1349)
PCIB (1351~1379)
RSTC (1391~1399)
CN1351 (Side B) PCI Card Edge Connector
CN1352 (Side A) PCI Card Edge Connector
IC1391
Reset IC
PST9142N
Manual reset
IC1392
TC74VHC14FT
H-UDI_RST
SYSRST
SH-3_CTRL
MOTHER BOARD ASSY J2 (PCI SLOT)
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-S2.3, MFD BY ROHM CO., LTD. FOR IC1351.
SH-3_ADRS
SH-3_CTRL
SH-3_DATA
F 2/2
: The power supply is shown with the marked box.
F 1/2

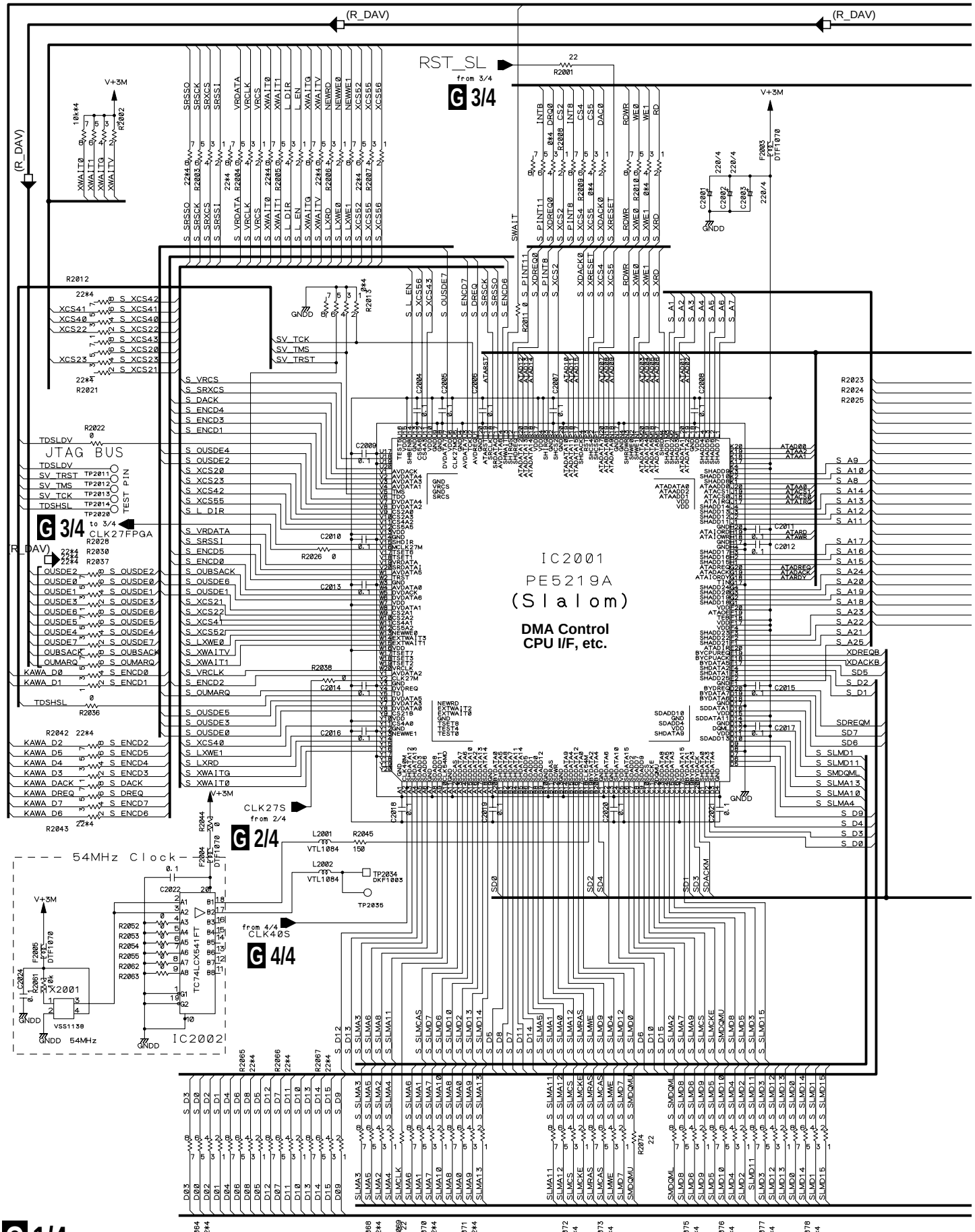
3.9 DECB ASSY (2/2)



F 2/2 DECB ASSY (DWP1081)



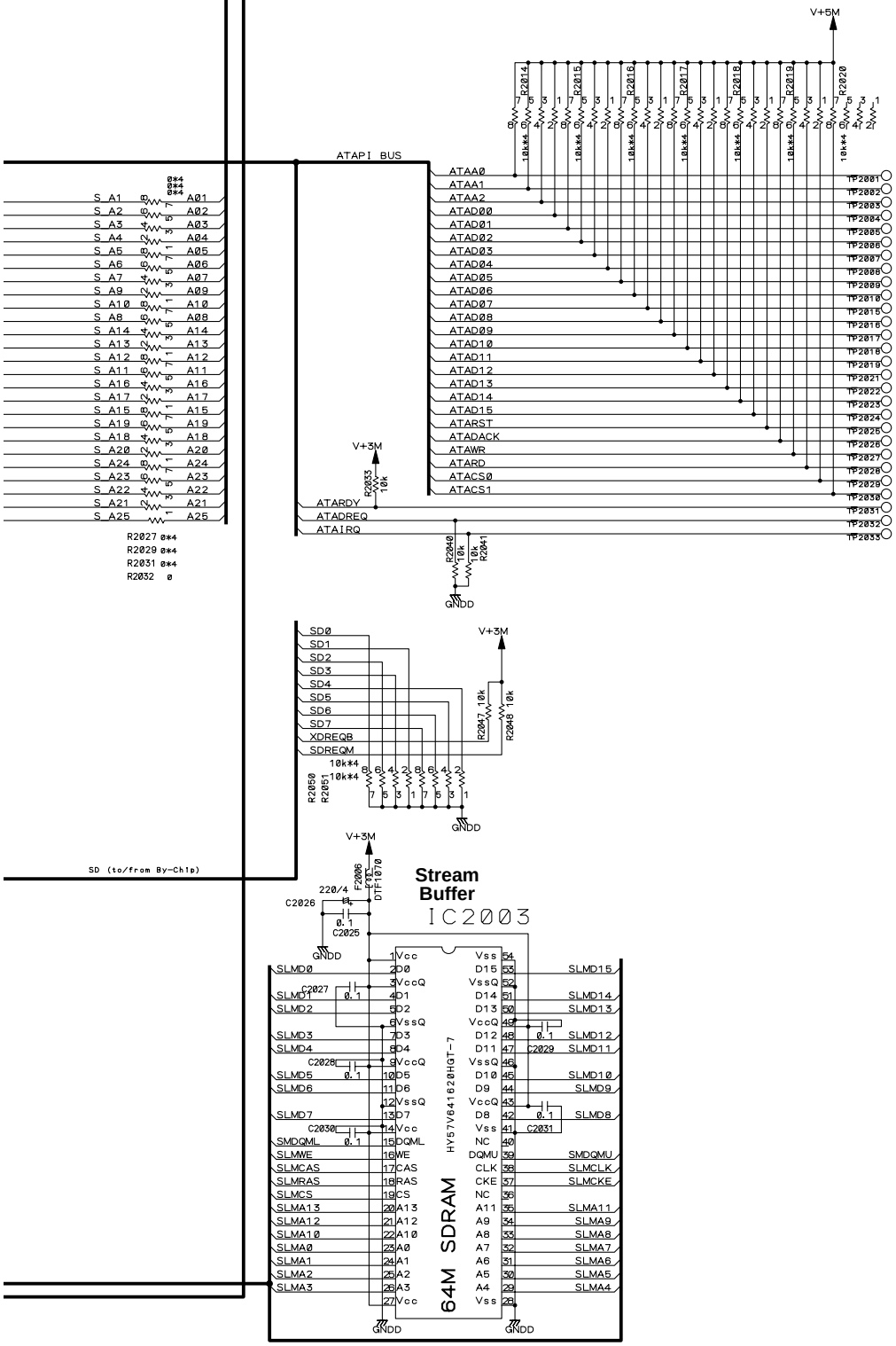
3.10 PCIB ASSY (1/4)



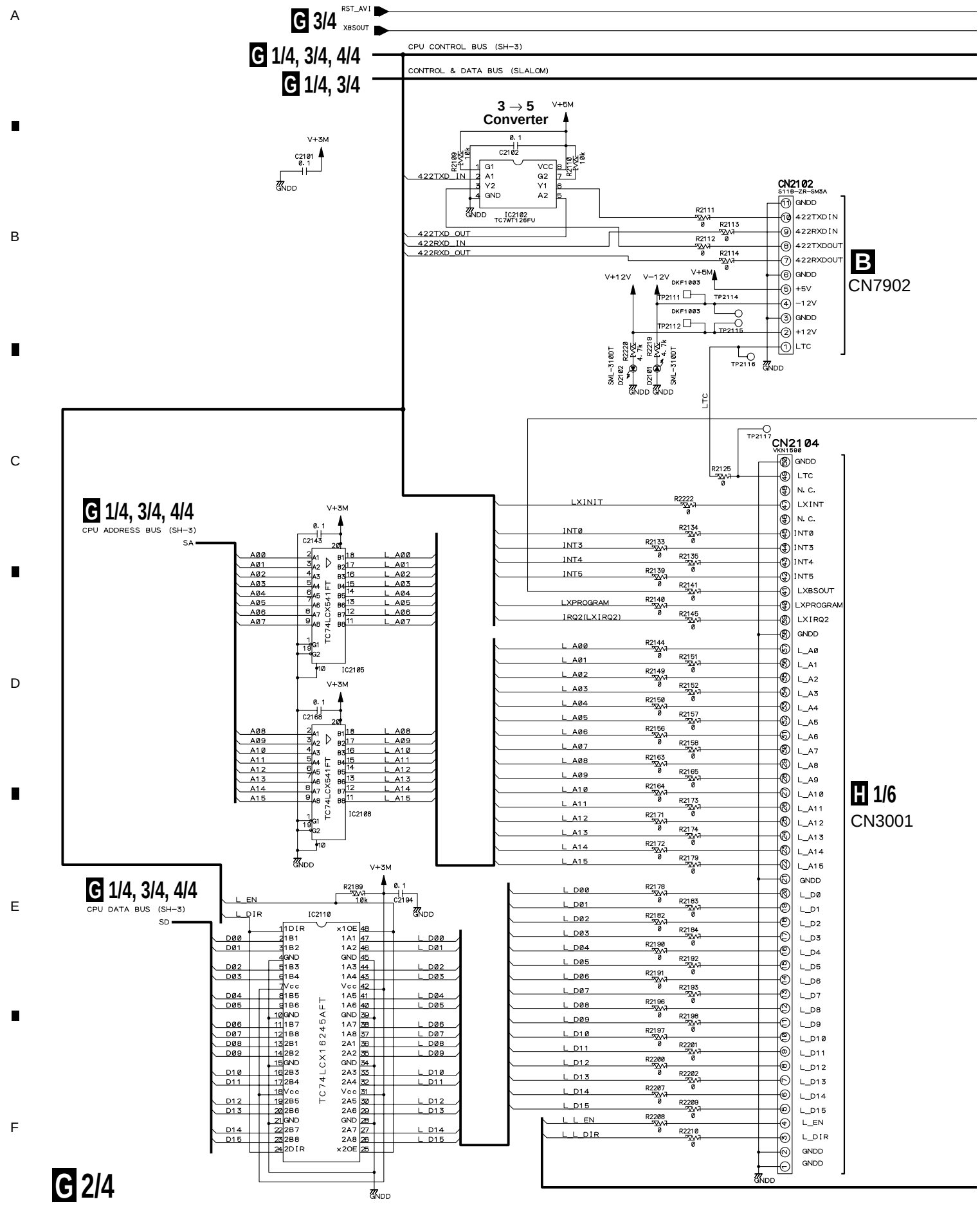
ENC DATA(to PCI FPGA)
(R_DAV) ENC DATA(From DVXcel)
SLC (Slalom CONTROL BUS) G 2/4, 3/4

SC (CPU CONTROL BUS (SH-3))
SA (CPU ADDRESS BUS (SH-3)) G 2/4 - 4/4
SD (CPU DATA BUS (SH-3))

(R_DAV): Recording Signal Route (Digital Audio/Video)

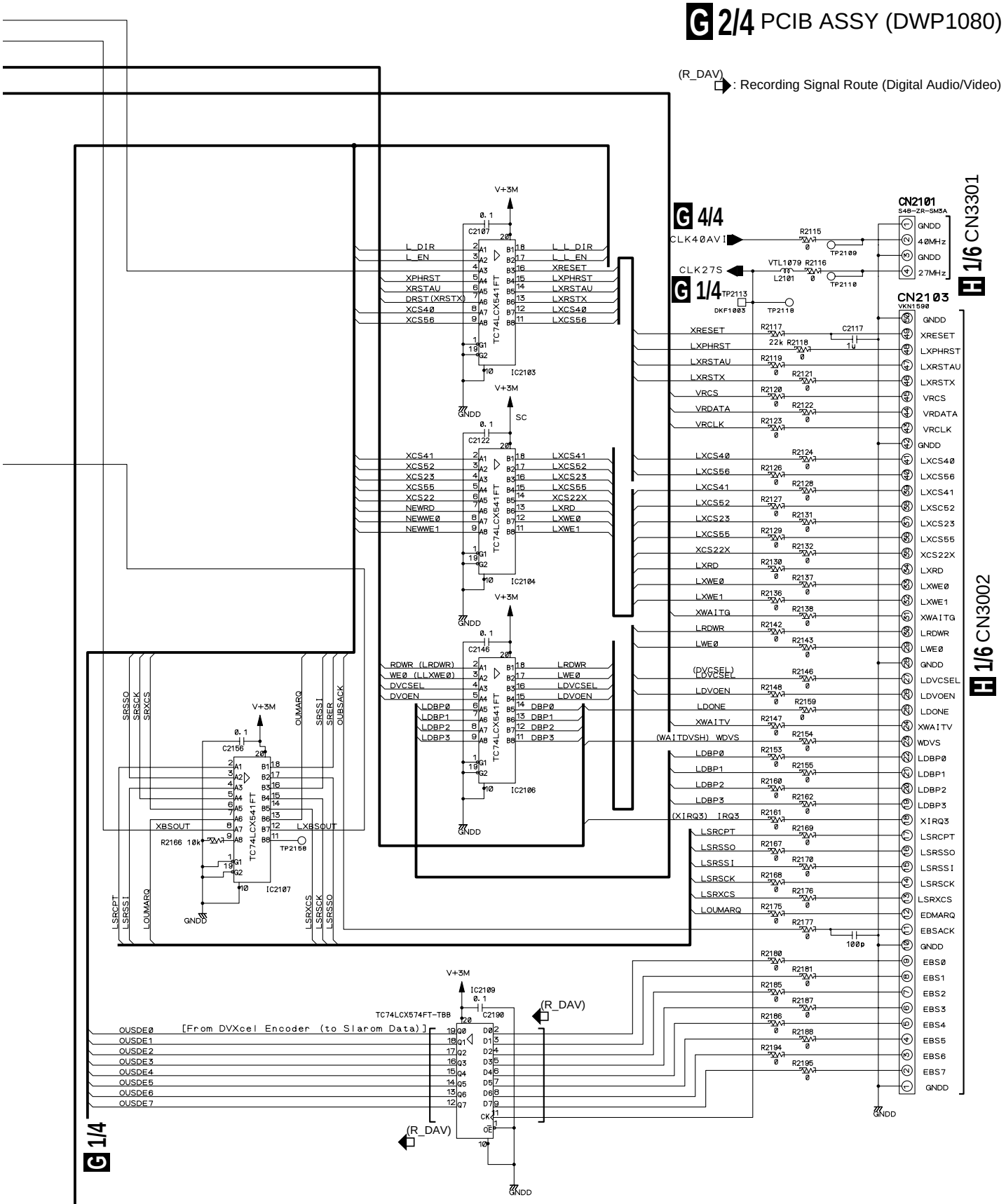


3.11 PCIB ASSY (2/4)



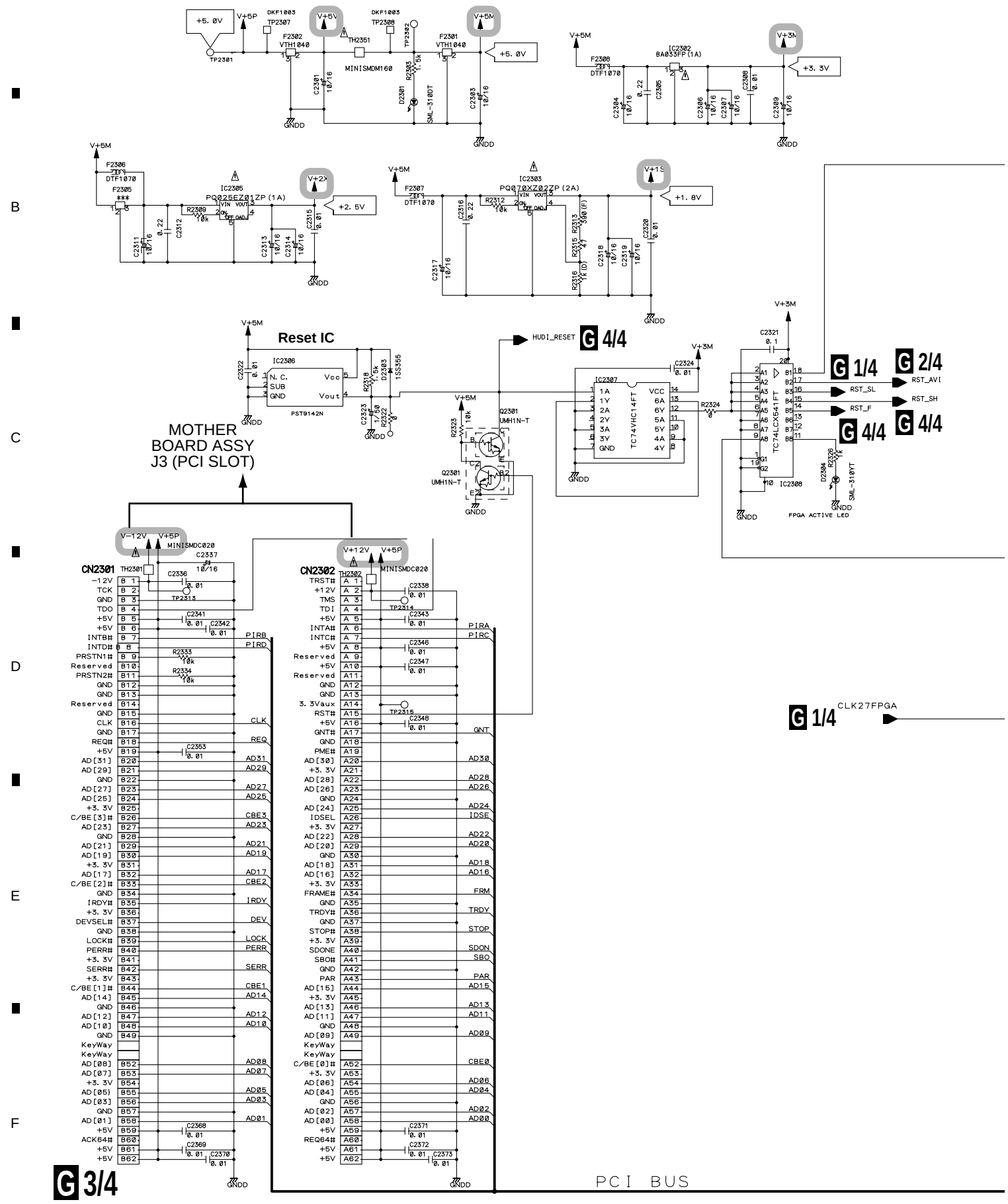
G 2/4 PCIB ASSY (DWP1080)

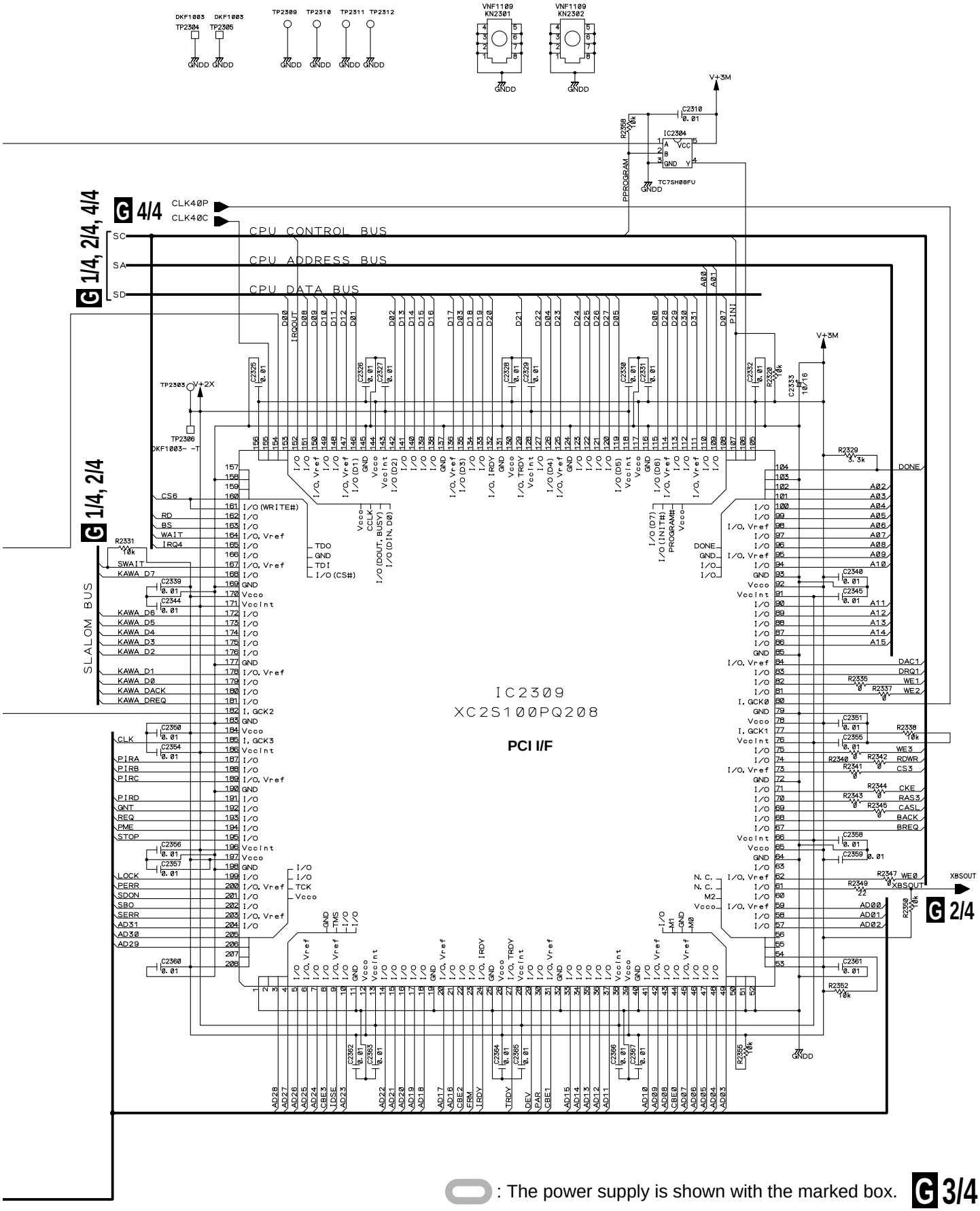
(R_DAV): Recording Signal Route (Digital Audio/Video)



3.12 PCIB ASSY (3/4)

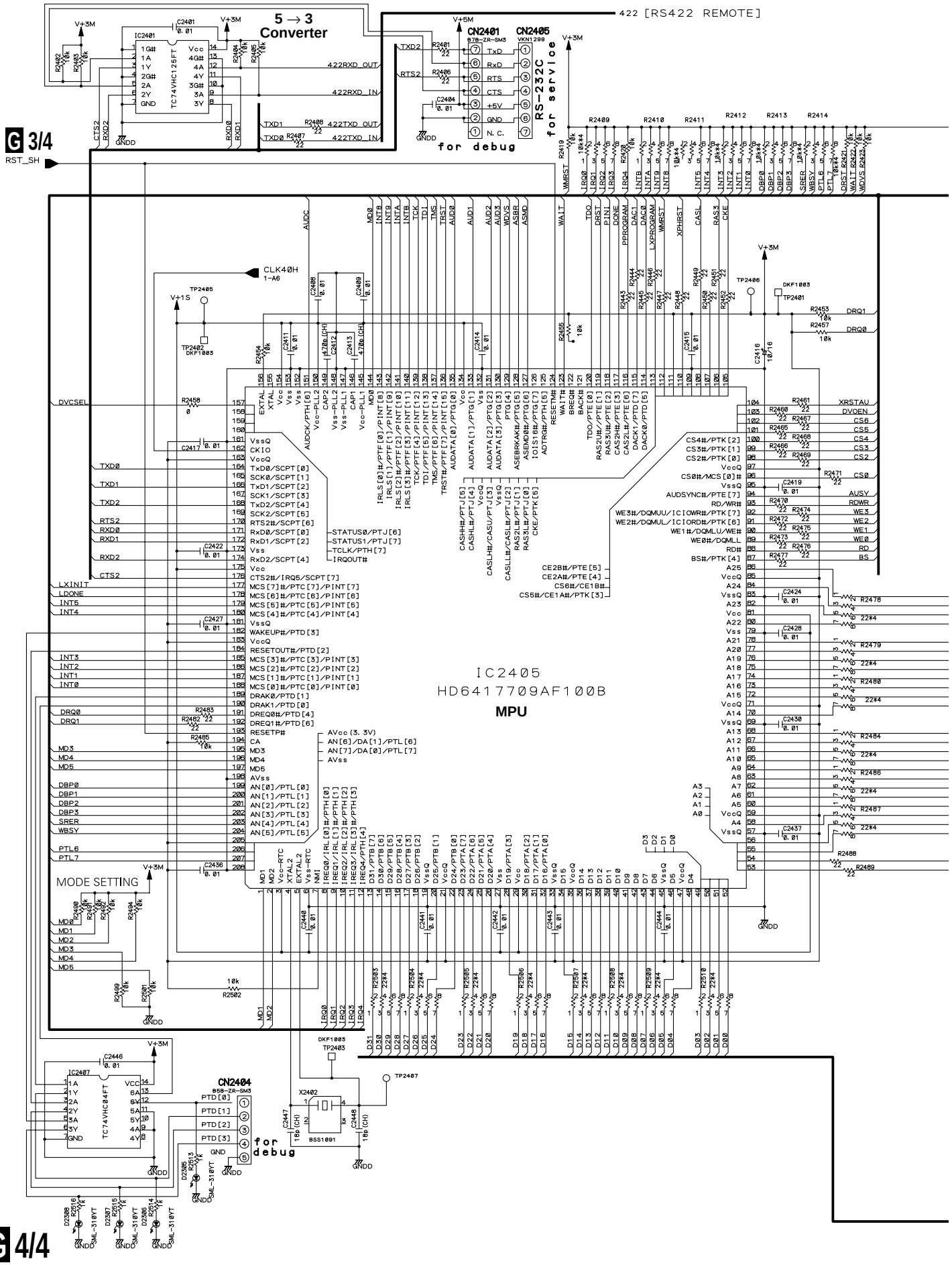
G 3/4 PCIB ASSY (DWP1080)



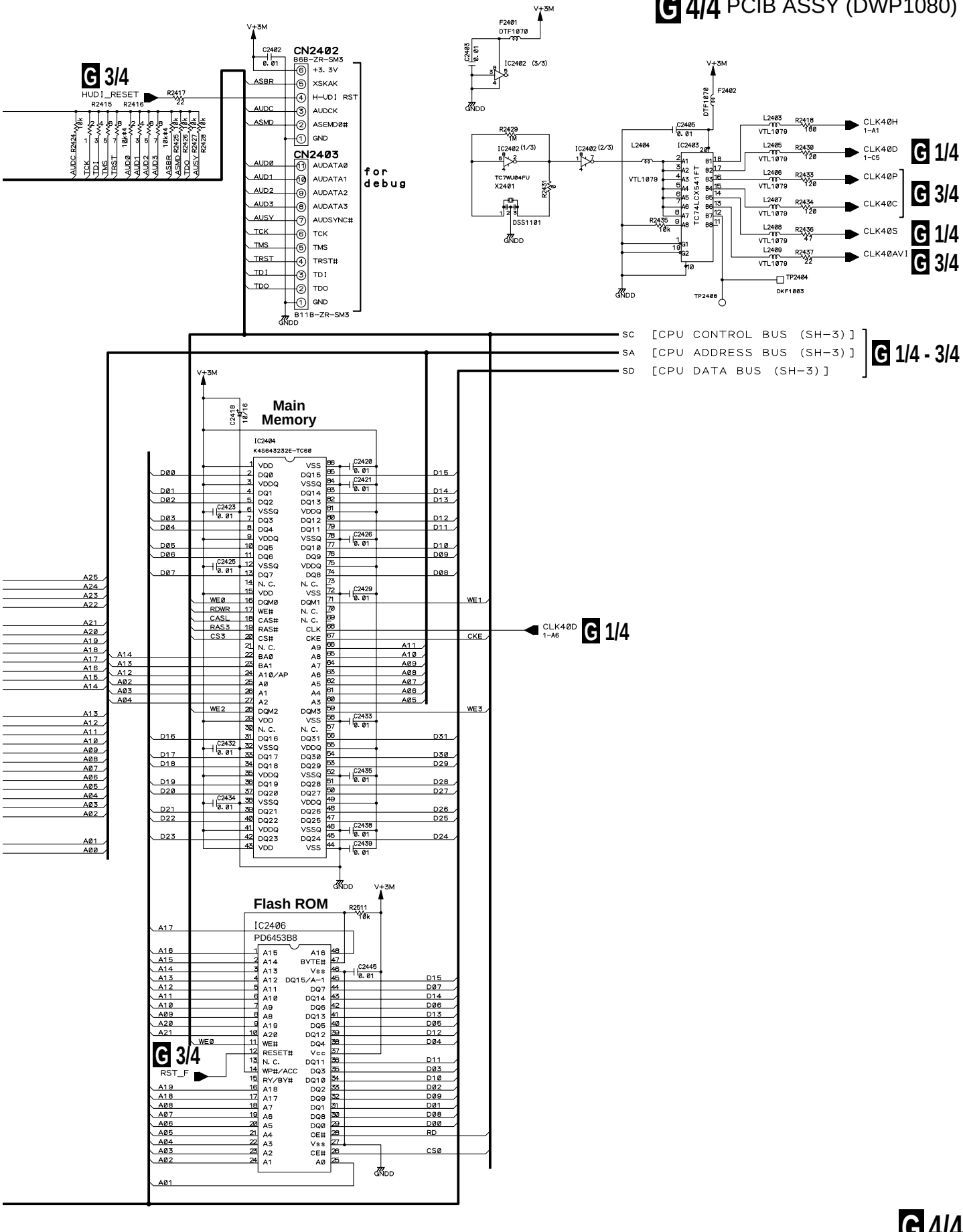


: The power supply is shown with the marked box.

3.13 PCIB ASSY (4/4)



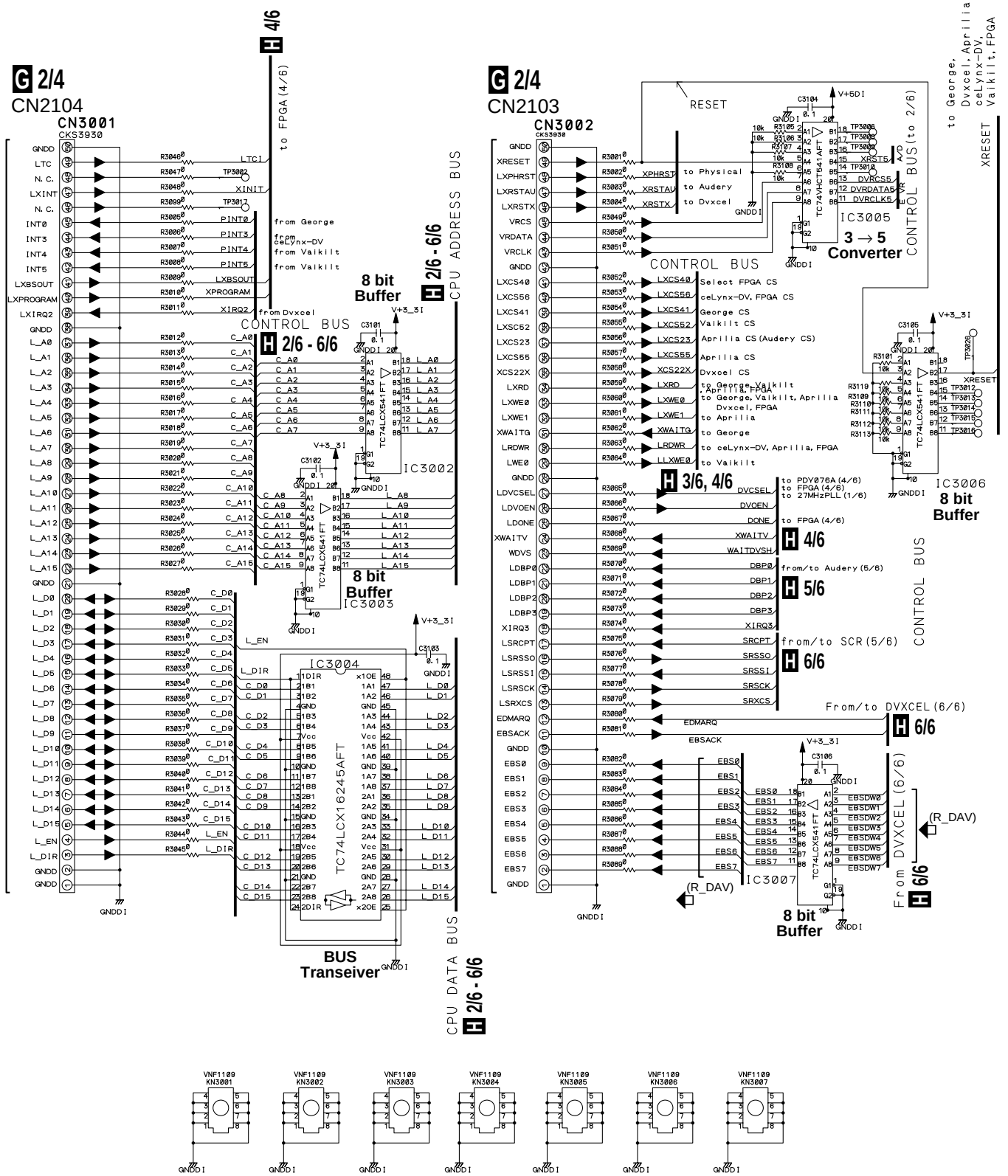
G 4/4 PCIB ASSY (DWP1080)



G 4/4

3.14 AVIB ASSY (1/6)

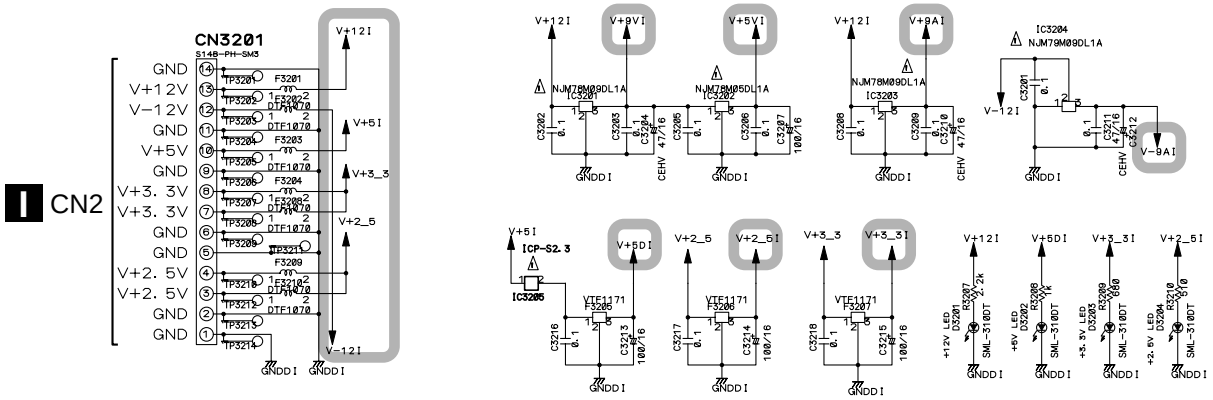
H 1/6 AVIB ASSY (DWV1198)



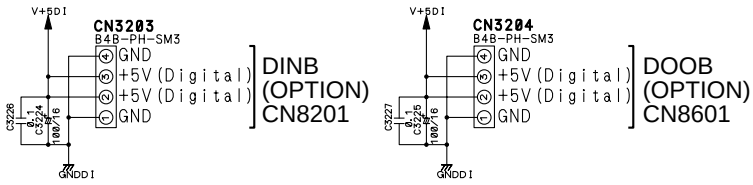
H 1/6

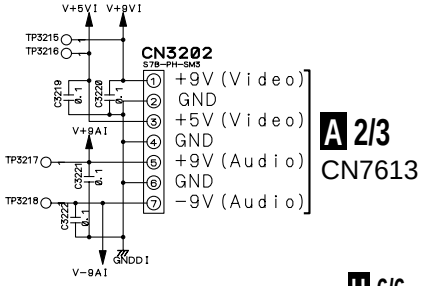
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-S2.3, MFD BY ROHM CO., LTD. FOR IC3205.

(R_DAV) : Recording Signal Route (Digital Audio/Video)

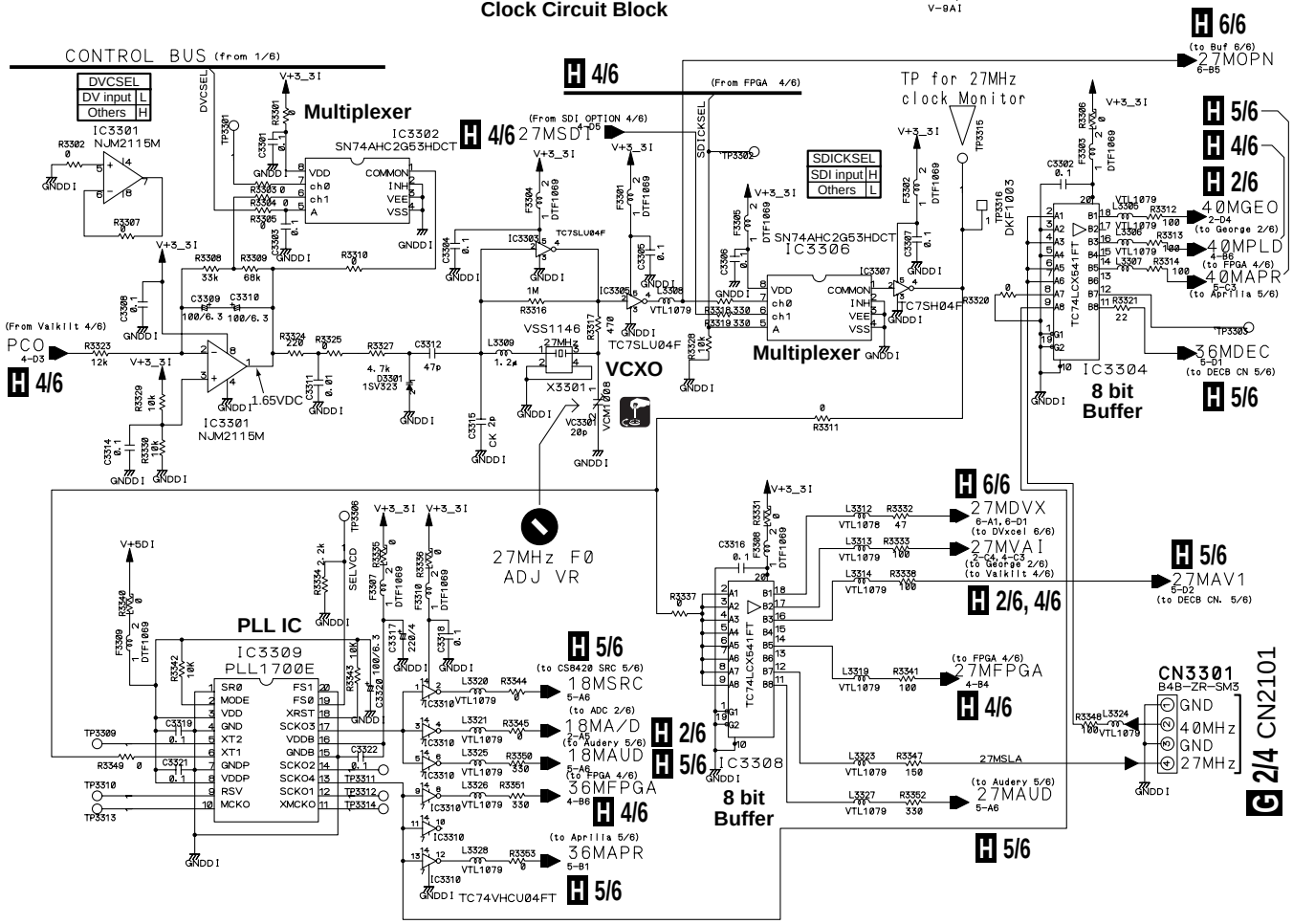


Power Circuit Block





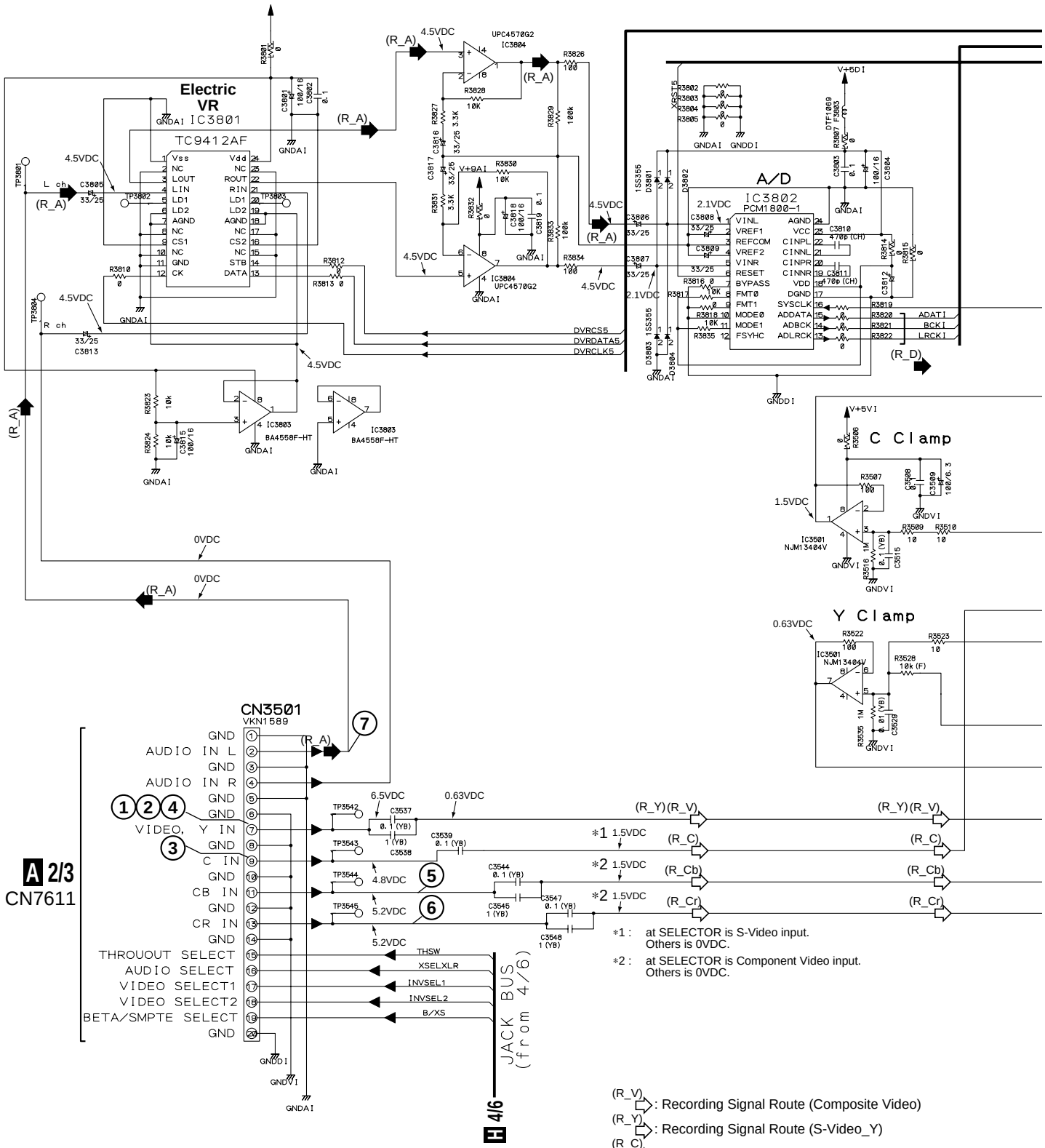
Clock Circuit Block



: The power supply is shown with the marked box.

3.15 AVIB ASSY (2/6)

H 2/6 AVIB ASSY (DWV1198)



*1 : at SELECTOR is S-Video input.
Others is 0VDC.

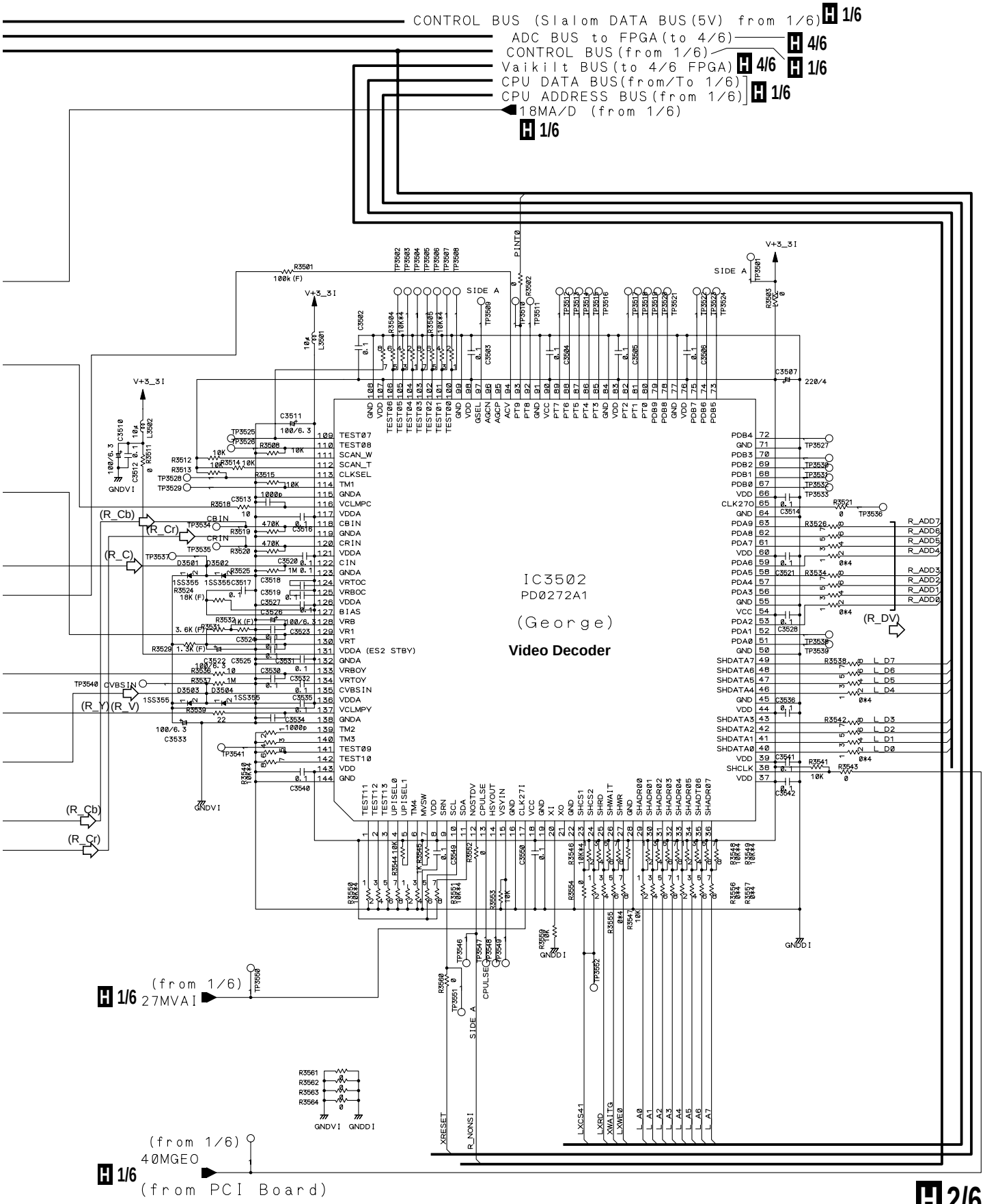
*2 : at SELECTOR is Component Video input.
Others is 0VDC.

(default)

	L	H
THROUOUT SELECT	NON	THROU
AUDIO SELECT	RCA	XLR
VIDEO SELECT 1	CVBS	S
VIDEO SELECT 2	CV/S	YPbPr
BETA/SMPTE SELECT	BETA	SMPTE

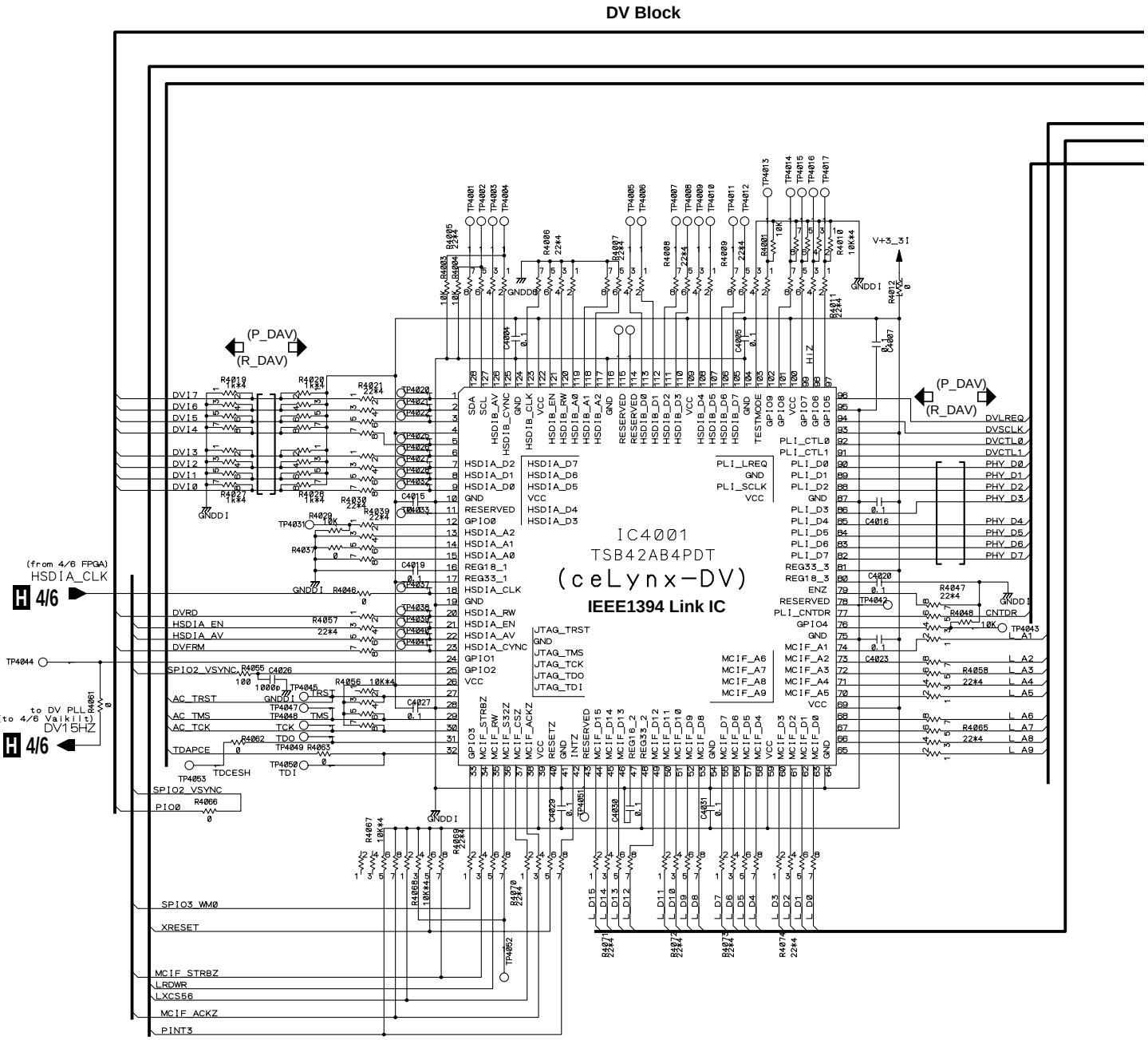
(R_V): Recording Signal Route (Composite Video)
(R_Y): Recording Signal Route (S-Video_Y)
(R_C): Recording Signal Route (S-Video_C)
(R_Cb): Recording Signal Route (Component_Cb)
(R_Cr): Recording Signal Route (Component_Cr)
(R_DV): Recording Signal Route (Digital Video)
(R_A): Recording Signal Route (Analog Audio L ch)
(R_D): Recording Signal Route (Digital Audio)

H 2/6

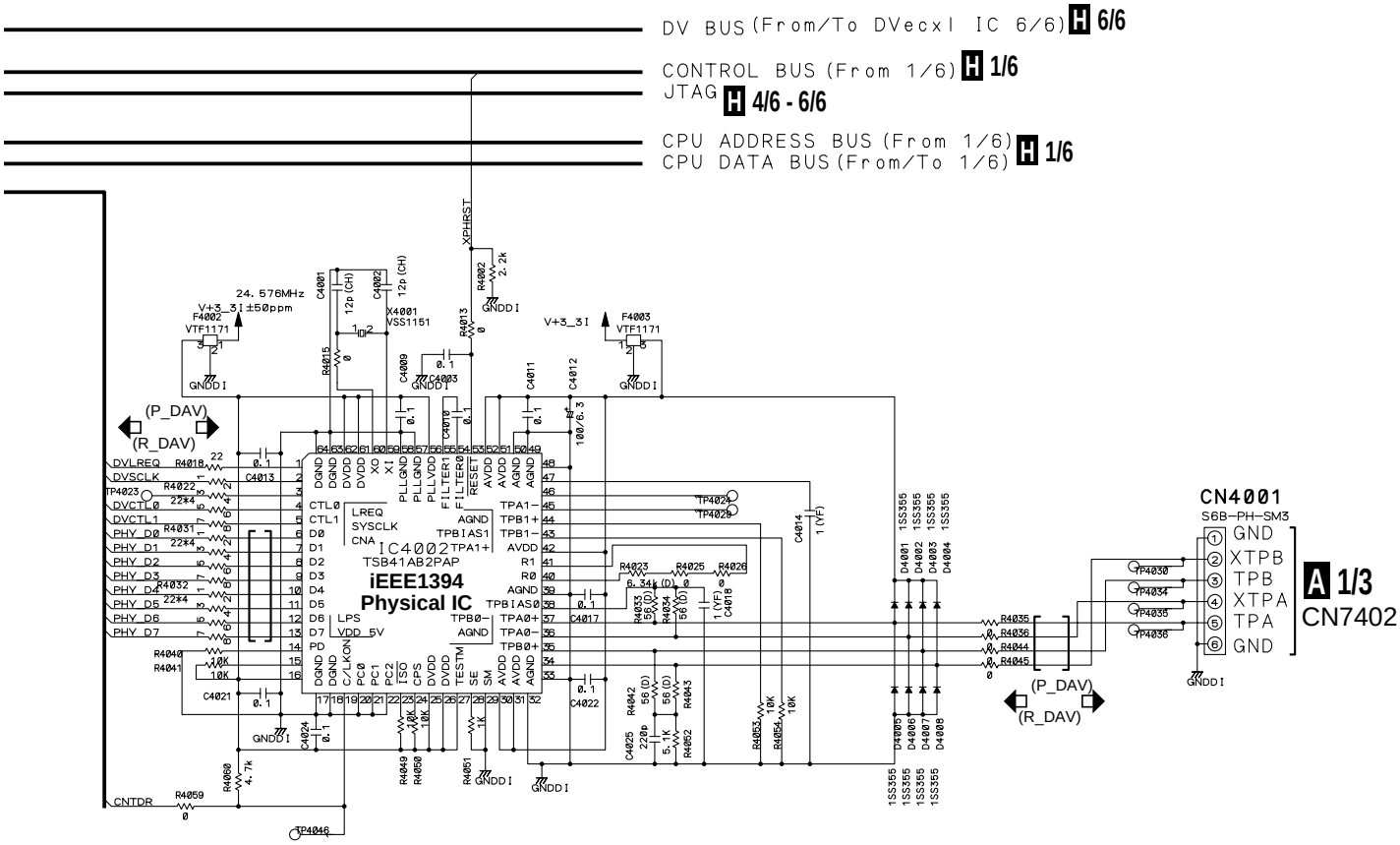

CONTROL BUS (Slalom DATA BUS(5V) from 1/6) H 1/6
ADC BUS to FPGA(to 4/6) H 4/6
CONTROL BUS(from 1/6) H 4/6 H 1/6
Vaikilt BUS(to 4/6 FPGA)
CPU DATA BUS(from/To 1/6)
CPU ADDRESS BUS(from 1/6) H 1/6
18MA/D (from 1/6)
H 1/6
IC3502
PD0272A1
(George)
Video Decoder
(from 1/6)
27MVAI
H 1/6
(from 1/6)
40MGEO
H 1/6
(from PCI Board)
H 2/6

3.16 AVIB ASSY (3/6)

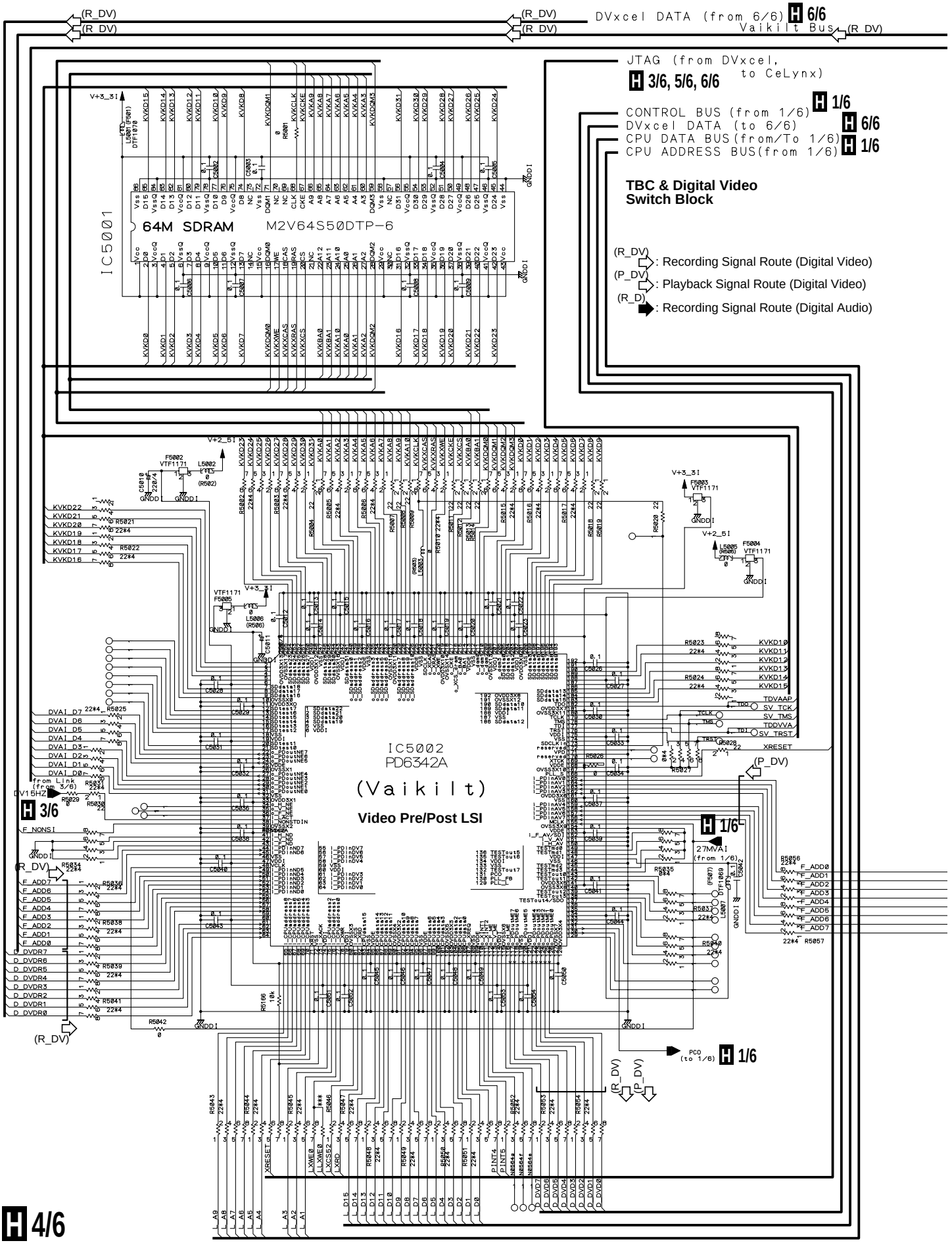
H 3/6 AVIB ASSY (DWV1198)

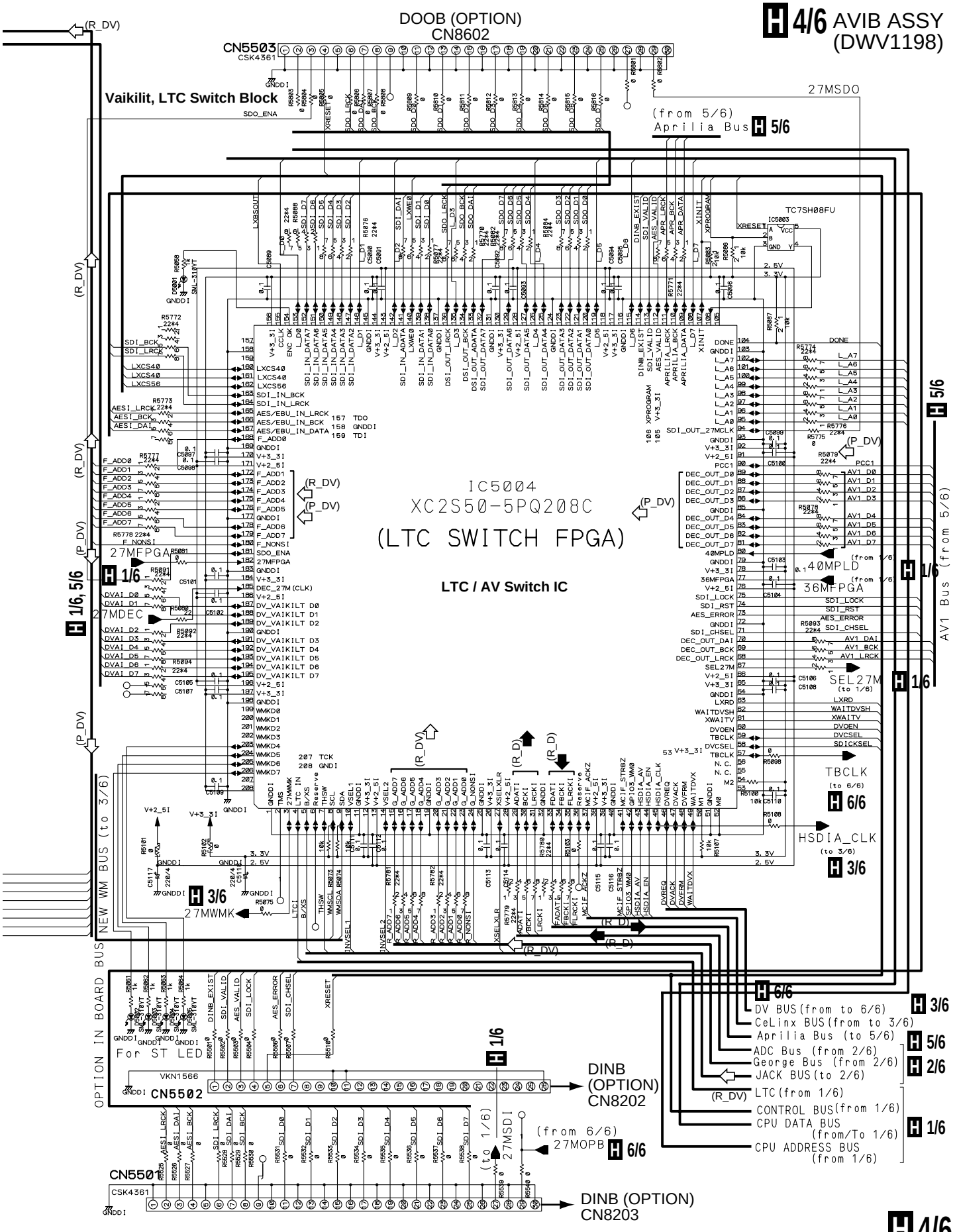


(R_DAV): Recording Signal Route (Digital Audio/Video)
(P_DAV): Playback Signal Route (Digital Audio/Video)

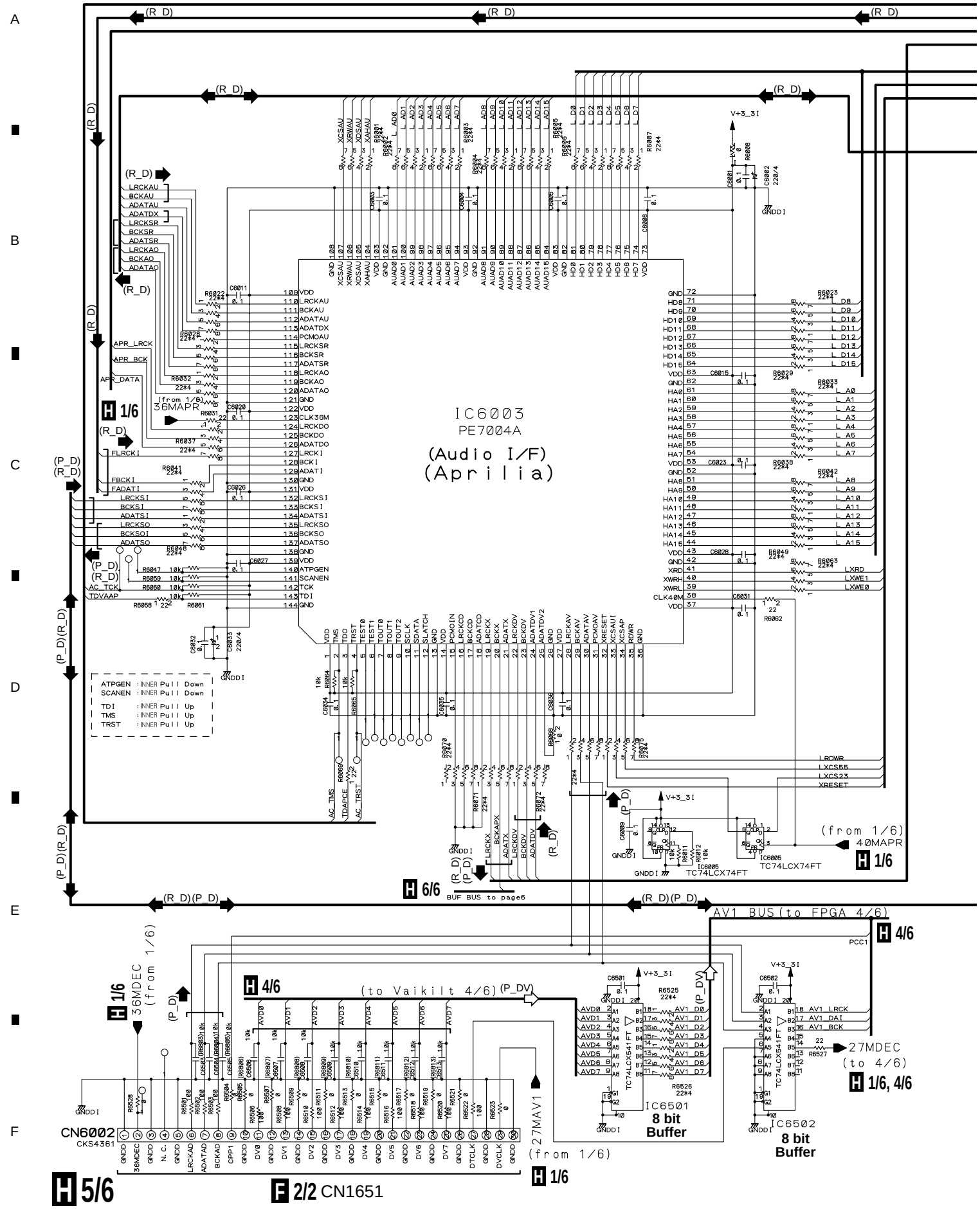


3.17 AVIB ASSY (4/6)


DVxcel DATA (from 6/6) H 6/6
Vaikilt Bus
JTAG (from DVxcel, to CeLynx)
H 3/6, 5/6, 6/6
CONTROL BUS (from 1/6) H 1/6
DVxcel DATA (to 6/6) H 6/6
CPU DATA BUS(from/To 1/6) H 1/6
CPU ADDRESS BUS(from 1/6) H 1/6
TBC & Digital Video Switch Block
(R_DV): Recording Signal Route (Digital Video)
(P_DV): Playback Signal Route (Digital Video)
(R_D): Recording Signal Route (Digital Audio)
IC5001
64M SDRAM M2V64S50DTP-6
IC5002
PD6342A
(Vaikilt)
Video Pre/Post LSI
H 4/6


DOOB (OPTION)
CN8602
CN5503
CSK4361
Vaikilit, LTC Switch Block
SDO_ENA
27MSDO
(from 5/6)
Aprilia Bus
H 5/6
TC7SH08FU
IC5004
XC2S50-5PQ208C
(LTC SWITCH FPGA)
LTC / AV Switch IC
27MFPGA
27MDEC
27MWMK
40MPLD
36MFPGA
SEL27M
TBCLK
HSDIA_CLK
NEW WM BUS (to 3/6)
OPTION IN BOARD BUS
For ST LED
VKN1566
CN5502
CN5501
CSK4361
DINB (OPTION) CN8202
DINB (OPTION) CN8203
DV BUS(from to 6/6)
CeLinx BUS(from to 3/6)
Aprilia Bus (to 5/6)
ADC Bus (from 2/6)
George Bus (from 2/6)
JACK BUS(to 2/6)
LTC(from 1/6)
CONTROL BUS(from 1/6)
CPU DATA BUS (from/To 1/6)
CPU ADDRESS BUS (from 1/6)
(from 6/6) 27MOPB
(to 1/6) 27MSDI
AV1 Bus (from 5/6)
H 1/6, 5/6
H 6/6
H 3/6
H 5/6
H 2/6
H 1/6
H 4/6

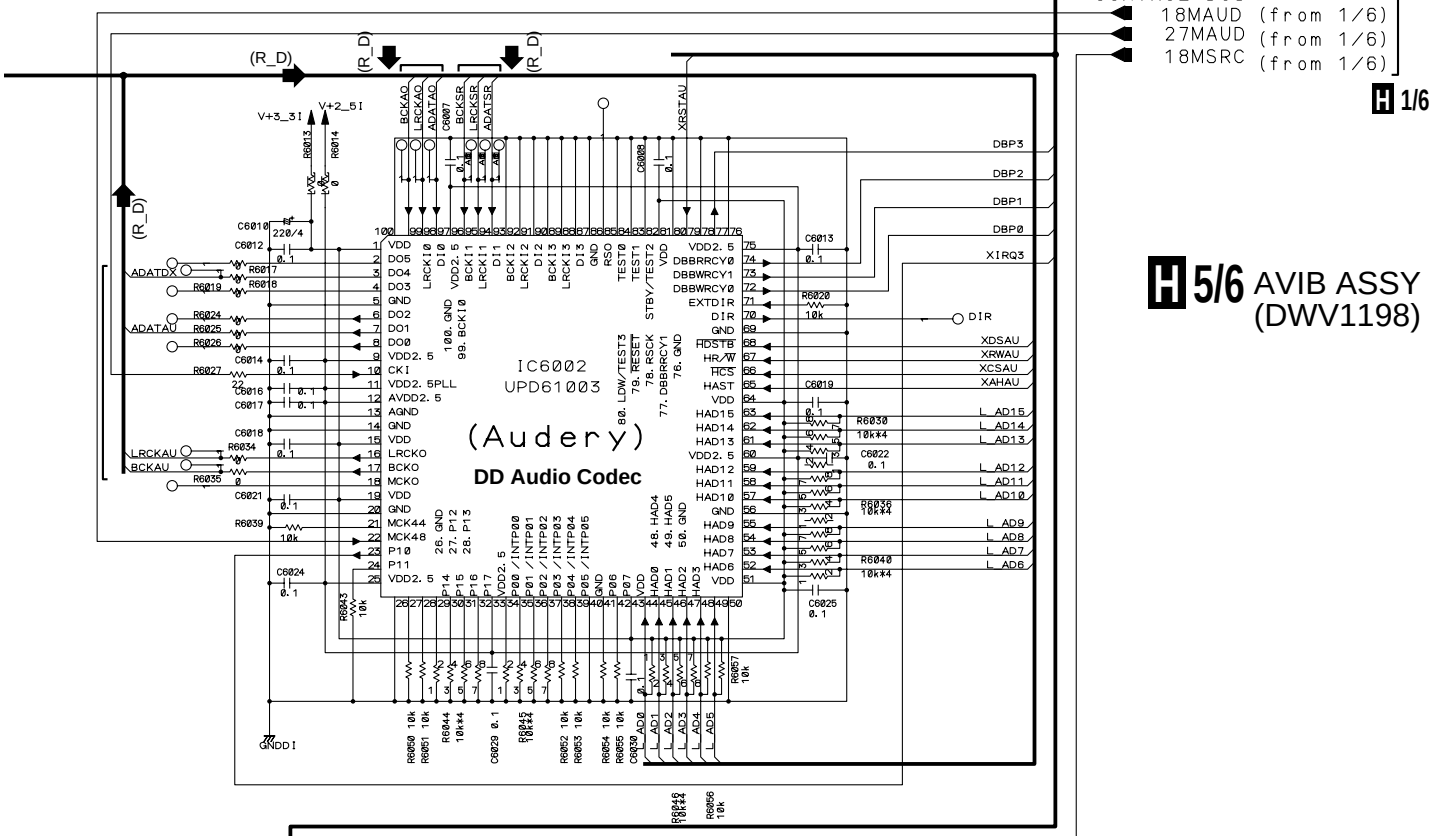
3.18 AVIB ASSY (5/6)



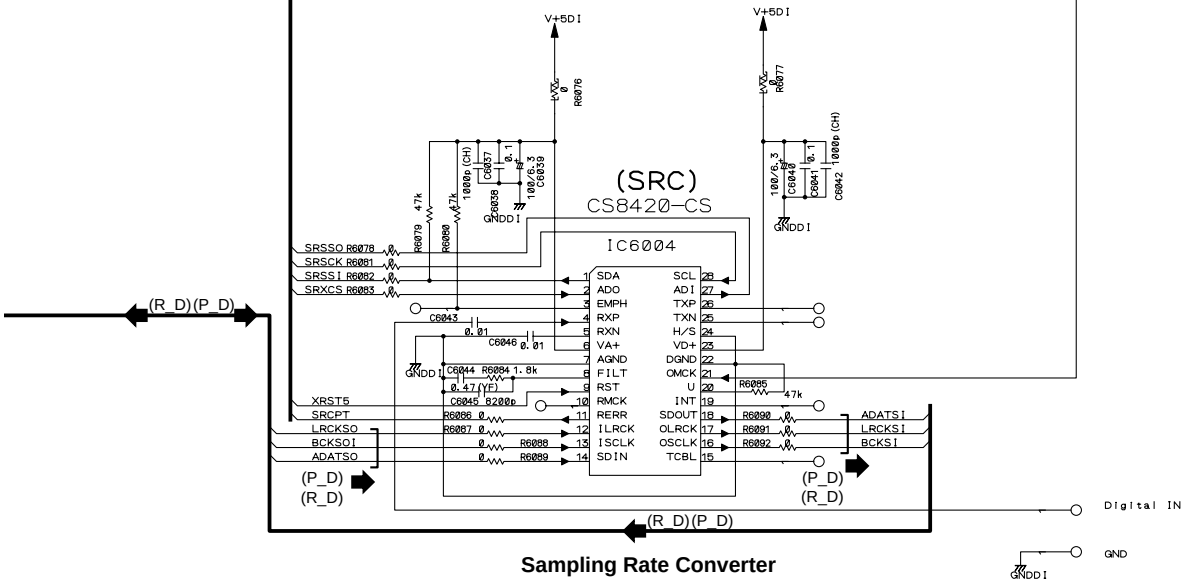
JTAG BUS H 3/6, 4/6, 6/6
Aprilia BUS(from FPGA)(from 4/6) H 4/6
Aprilia BUS(to FPGA)(to 4/6)
DVxcel BUS(form/to 6/6) H 6/6

DD Codec & Audio Switch Block

CPU DATA BUS(from/To 1/6)
CPU ADDRES BUS (from 1/6)
CONTROL BUS (from 1/6)
18MAUD (from 1/6)
27MAUD (from 1/6)
18MSRC (from 1/6)
H 1/6



H 5/6 AVIB ASSY (DWV1198)



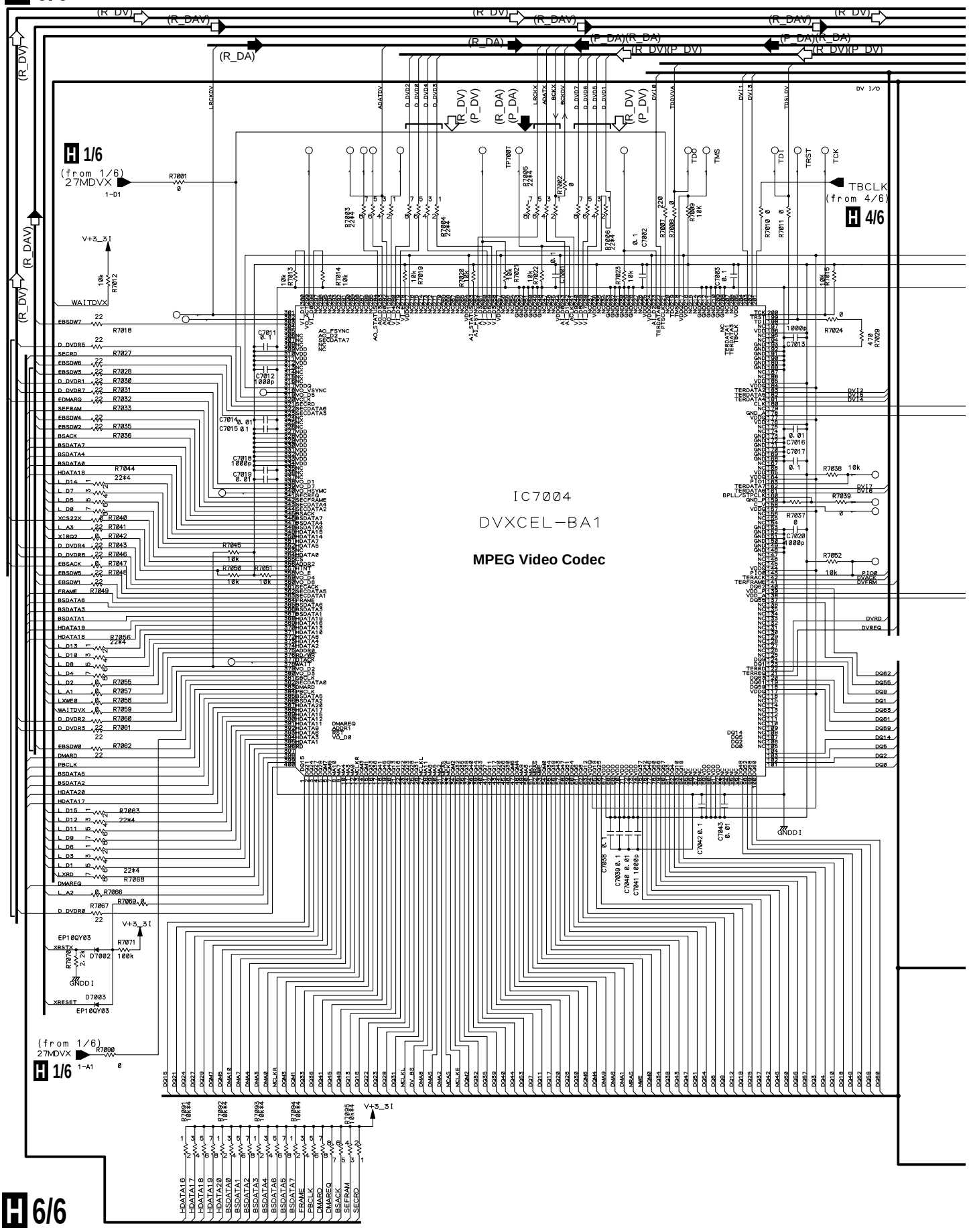
Sampling Rate Converter

(P_DV) : Playback Signal Route (Digital Video)
(R_D) : Recording Signal Route (Digital Audio)
(P_D) : Playback Signal Route (Digital Audio)

H 5/6

3.19 AVIB ASSY (6/6)

H 6/6 AVIB ASSY (DWV1198)



Slarom CONTROL BUS(from 1/6) H 1/6
D_DVDR (to Vaikilt)
to PCIB (to 1/6) H 1/6
CPU BUS (from/To 1/6) H 4/6 H 5/6
DVxcel BUS (from/to Aprilia)(from/to 5/6)
D_DVD (from Vaikilt) H 4/6
JTAG (from Slalom, to Vaikilt)
DV BUS from/to CeLynx (from 3/6) H 3/6 H 3/6, 4/6, 5/6
from/to FPGA(to 4/6)
H 4/6

(R_DV) (R_DAV) (R_DAV) (R_DV)
(P_DA)(R_DA)
(R_DV)(P_DV) (R_DV)(P_DV)
(R_DAV) (P_DAV)

BCKX

Aprilia to DVxcel

BCKAPX

V+2_0D V+3_3I GNDDI

F7002 F7003 F7004 F7006 F7007 VTF1171

R7096 R7097 R7098 R7034 R7053 R7054 R7017 R7026 R7099 R7505 R7506 R7507 R7508 R7509 R7510 R7511 R7512 R7513 R7514 R7064 R7065

0 (2125) 0 10k 47 100 16

C7004 C7005 C7006 C7007 C7008 C7009 C7010 C7021 C7022 C7023 C7024 C7025 C7026 C7027 C7028 C7029 C7030 C7031 C7032 C7033 C7034 C7035 C7036 C7037 C7038 C7039 C7040 C7041 C7042 C7043 C7044 C7045 C7046 C7047 C7048 C7049 C7050 C7051 C7052 C7053 C7054 C7055 C7056 C7057 C7058 C7059 C7060 C7061 C7062 C7063 C7064 C7065 C7066 C7067 C7068 C7069 C7070 C7071 C7072 C7073

0.1 220/4 47p (CH)

VSS1153 X7001 27.5M

IC7001 TC4LOGSHIFT

L7006 VTL1079

27MOPB to SDIB (to 4/6) H 4/6

27MOPN (from 1/6) H 1/6

8 bit Buffer

MPEG & DV Codec Block

V+2_5I → Power for DVXCEL (2.5V) (2.0V)

V+2_5I R7501 0 (2125) IC7501 PQ070XZ02ZP (2.0A) VIN VOUT R7502 10k 2% ADJ C7501 0.1 F7501 R7504 560 (F) R7505 3.9 R7507 1k (D) C7503 220/4 C7504 0.01 C7505 220/4 V+2_0D TP7501 DKF1003 TP7502

(R_DV): Recording Signal Route (Digital Video)
(P_DV): Playback Signal Route (Digital Video)
(R_D): Recording Signal Route (Digital Audio)
(P_D): Playback Signal Route (Digital Audio)
(R_DAV): Recording Signal Route (Digital Audio/Video)
(P_DAV): Playback Signal Route (Digital Audio/Video)

IC7002 IC7003 W98643 2DH-7

DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15 DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23 DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31

Vcc VccQ Vss VssQ NC DQM0 DQM1 DQM2 DQM3 DQM4 DQM5 DQM6 DQM7 WE CAS RAS CS BS0 BS1 A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 CLK CKE

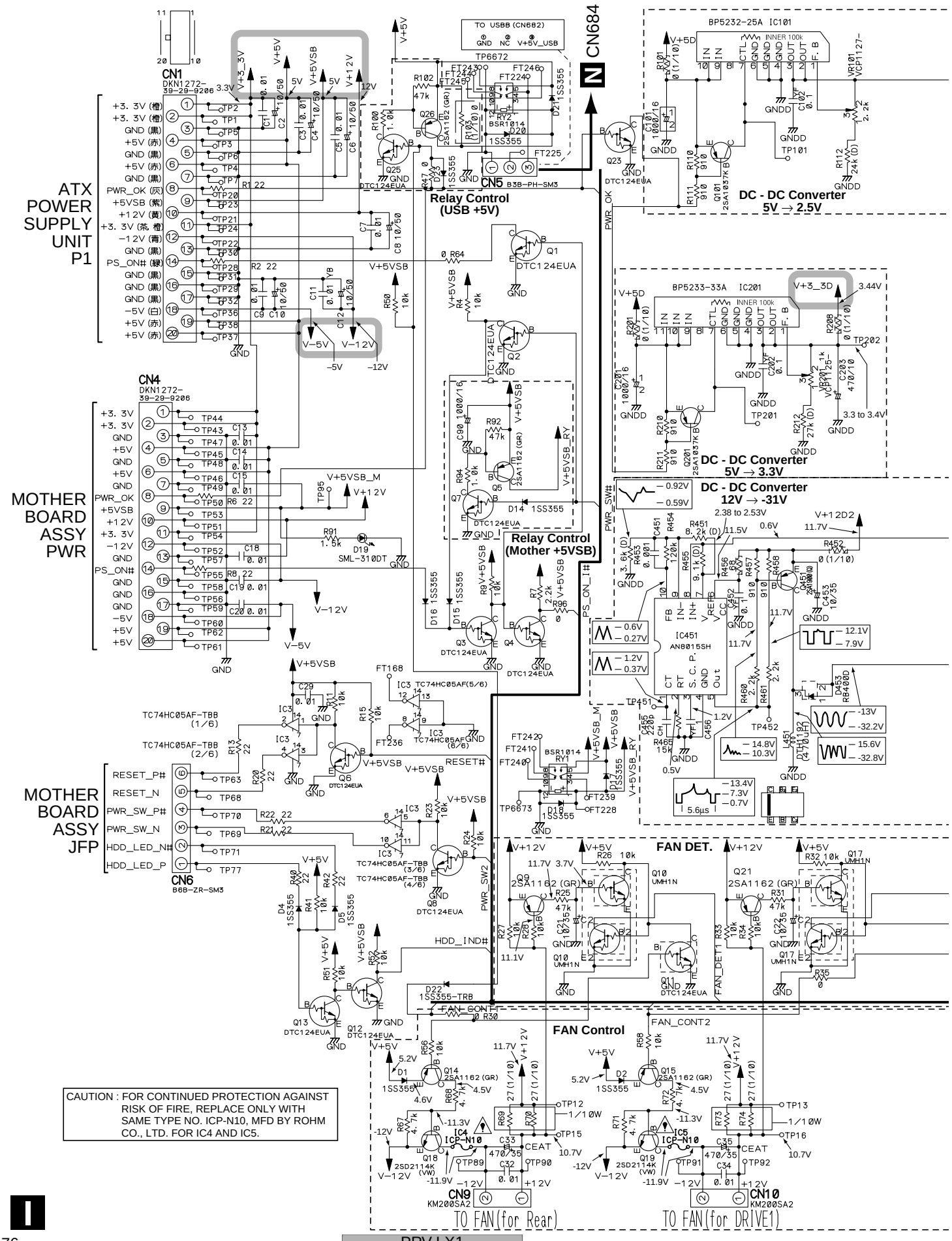
DMA0 DMA1 DMA2 DMA3 DMA4 DMA5 DMA6 DMA7 DMA8 DMA9 DMA10 DV_BS MCLKE MCAS MRAS MWE MCLKL MCLKR

64M SDRAM 64M SDRAM

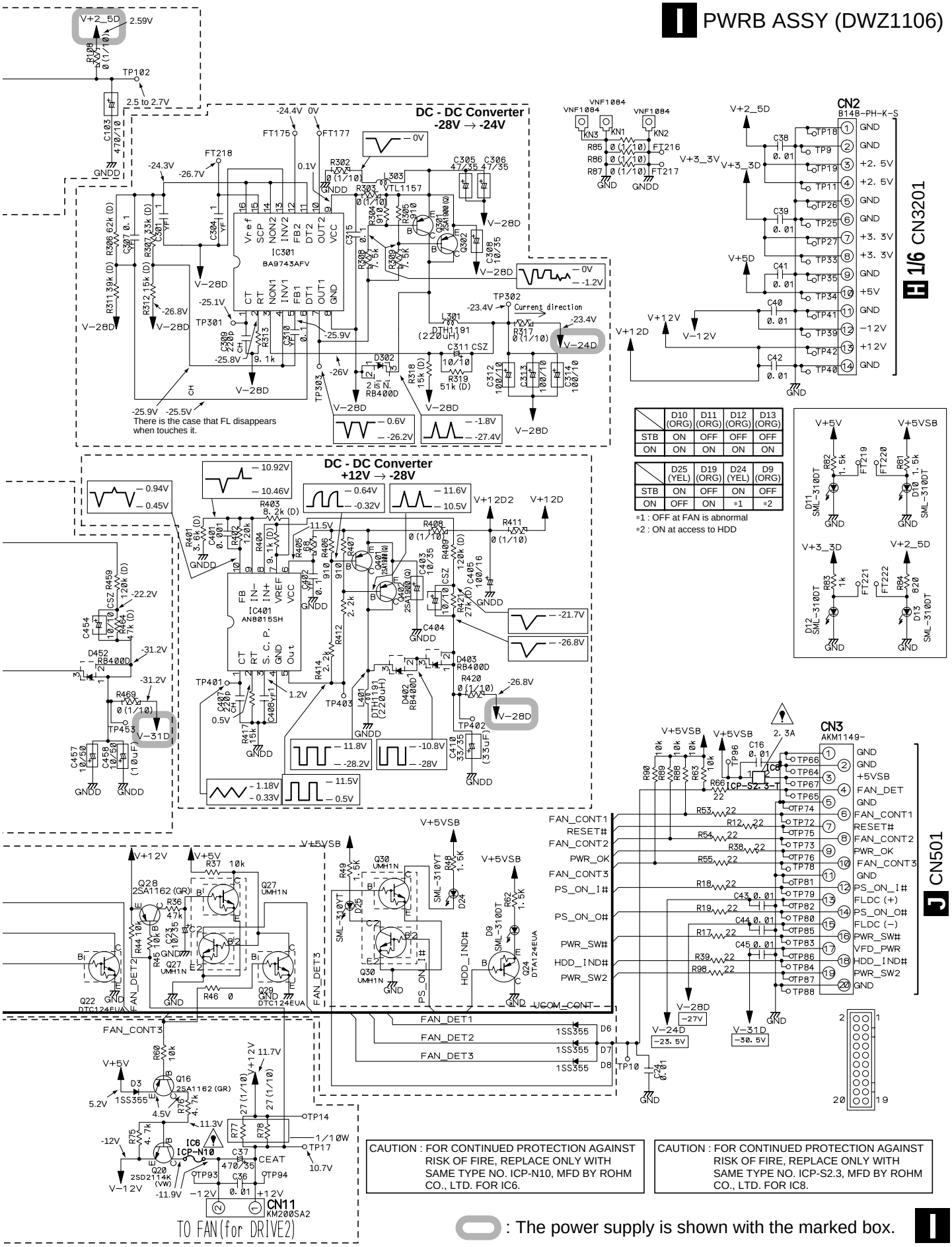
: The power supply is shown with the marked box.

H 6/6

3.20 PWRB ASSY


ATX POWER SUPPLY UNIT P1
MOTHER BOARD ASSY PWR
MOTHER BOARD ASSY JFP
CN1
CN4
CN6
CN684
CN5 B3B-PH-SM3
CN9 KM200SA2
CN10 KM200SA2
TO FAN(for Rear)
TO FAN(for DRIVE1)
Relay Control (USB +5V)
Relay Control (Mother +5VSB)
DC - DC Converter 5V → 2.5V
DC - DC Converter 5V → 3.3V
DC - DC Converter 12V → -31V
FAN DET.
FAN Control
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N10, MFD BY ROHM CO., LTD. FOR IC4 AND IC5.

I PWRB ASSY (DWZ1106)



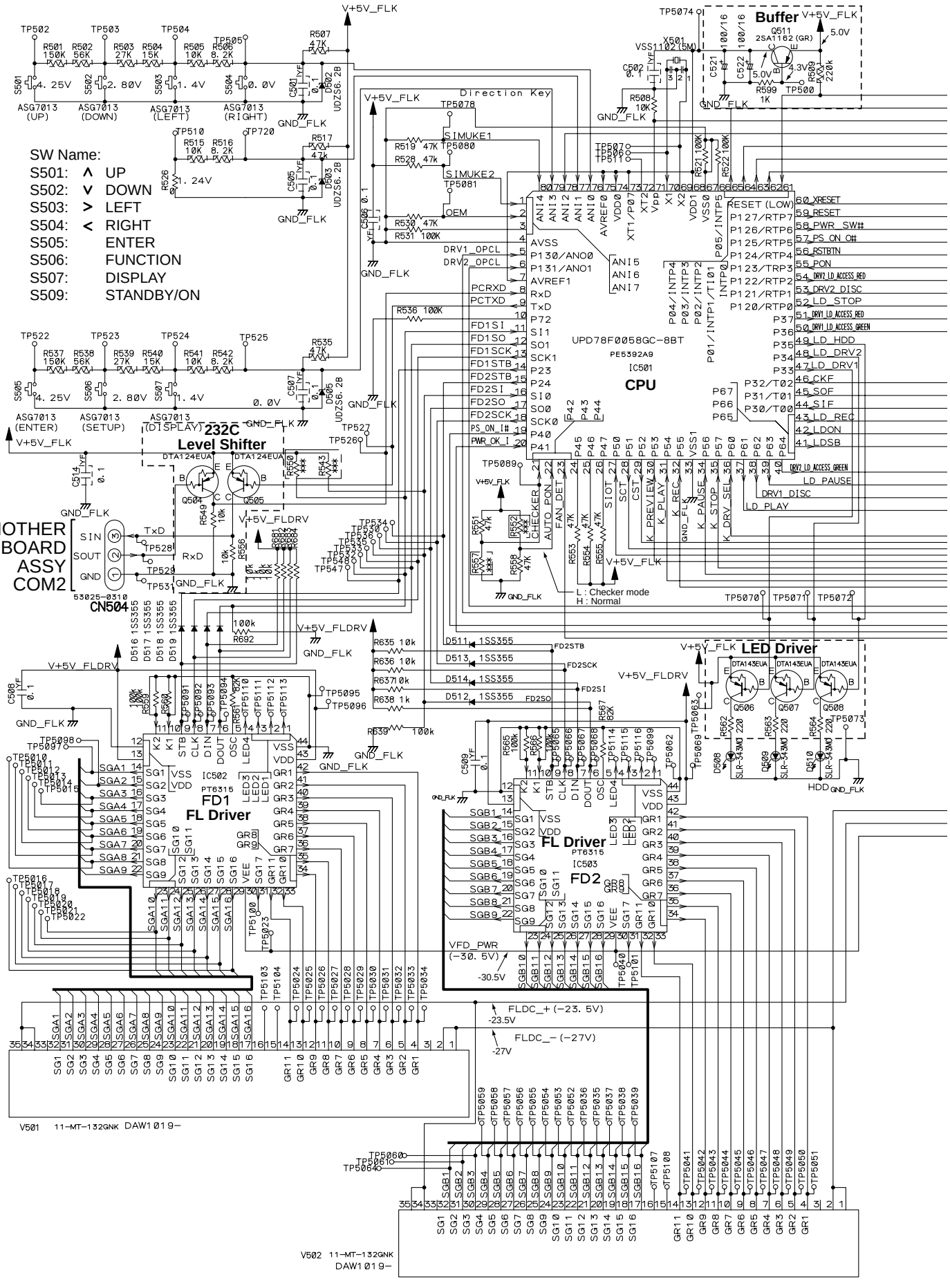
	D10 (ORG)	D11 (ORG)	D12 (ORG)	D13 (ORG)
STB	ON	OFF	OFF	OFF
ON	ON	ON	ON	ON

	D25 (YEL)	D19 (ORG)	D24 (YEL)	D9 (ORG)
STB	ON	OFF	ON	OFF
ON	OFF	ON	*1	*2

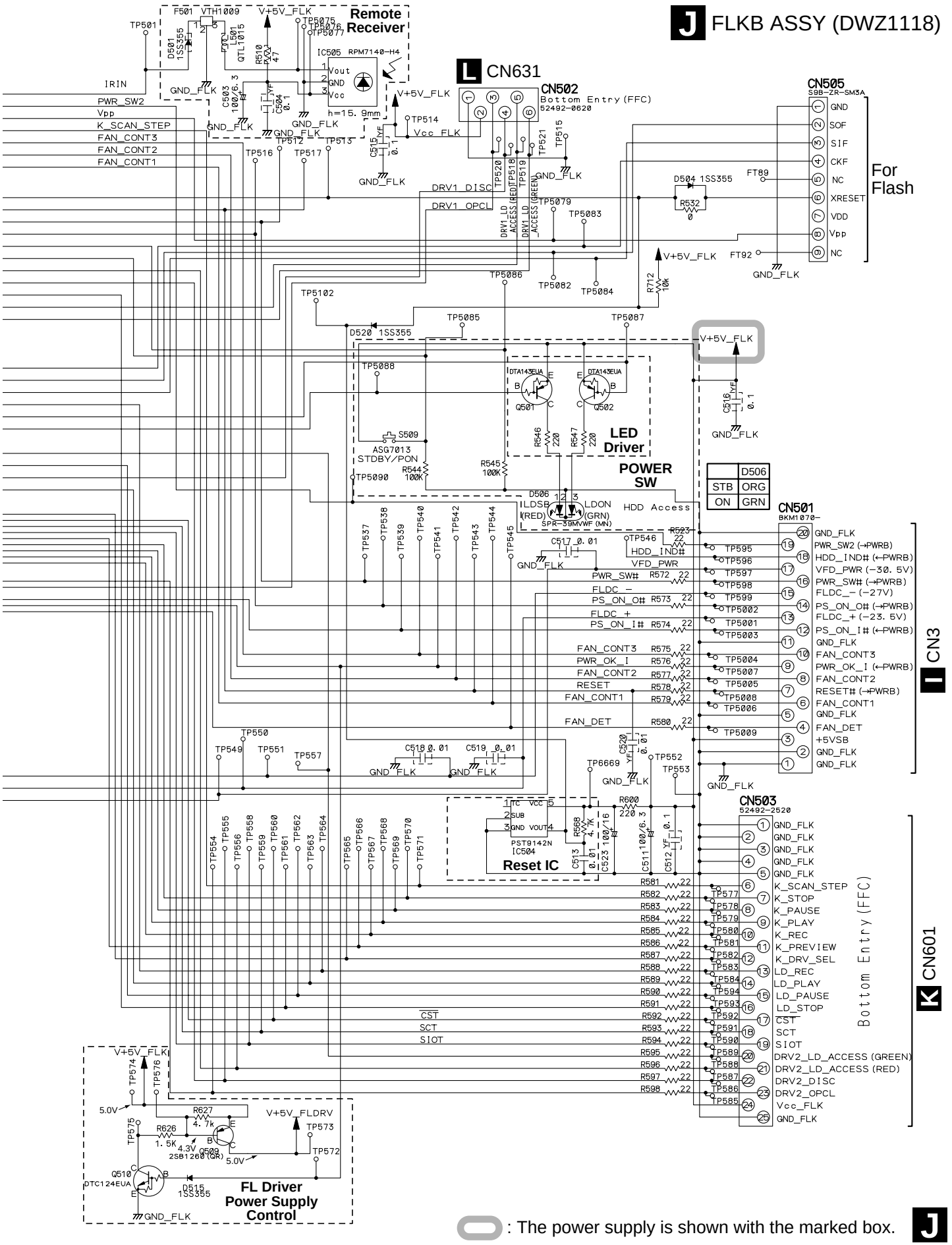
*1 : OFF at FAN is abnormal
*2 : ON at access to HDD

: The power supply is shown with the marked box.

3.21 FLKB ASSY



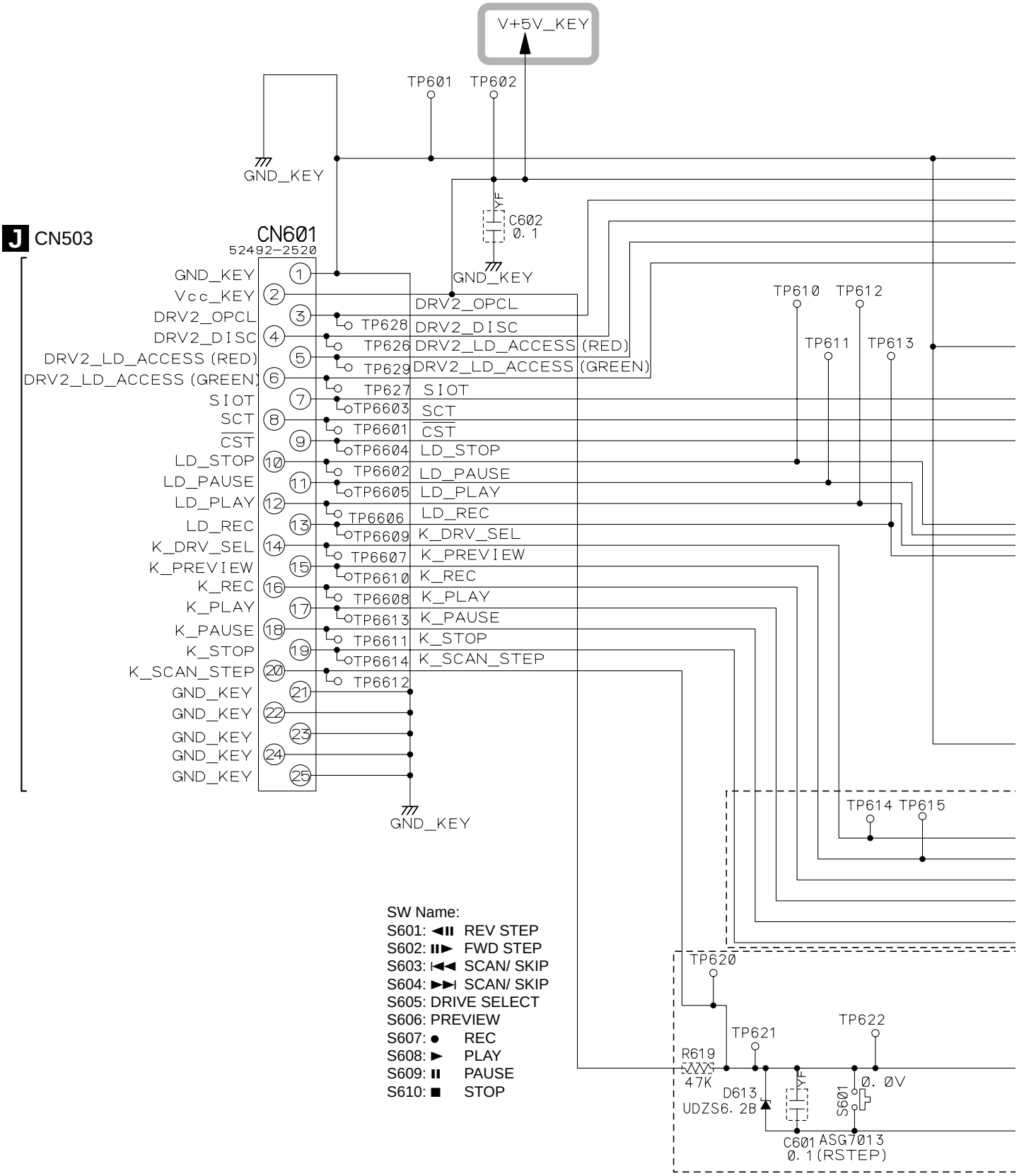
J FLKB ASSY (DWZ1118)

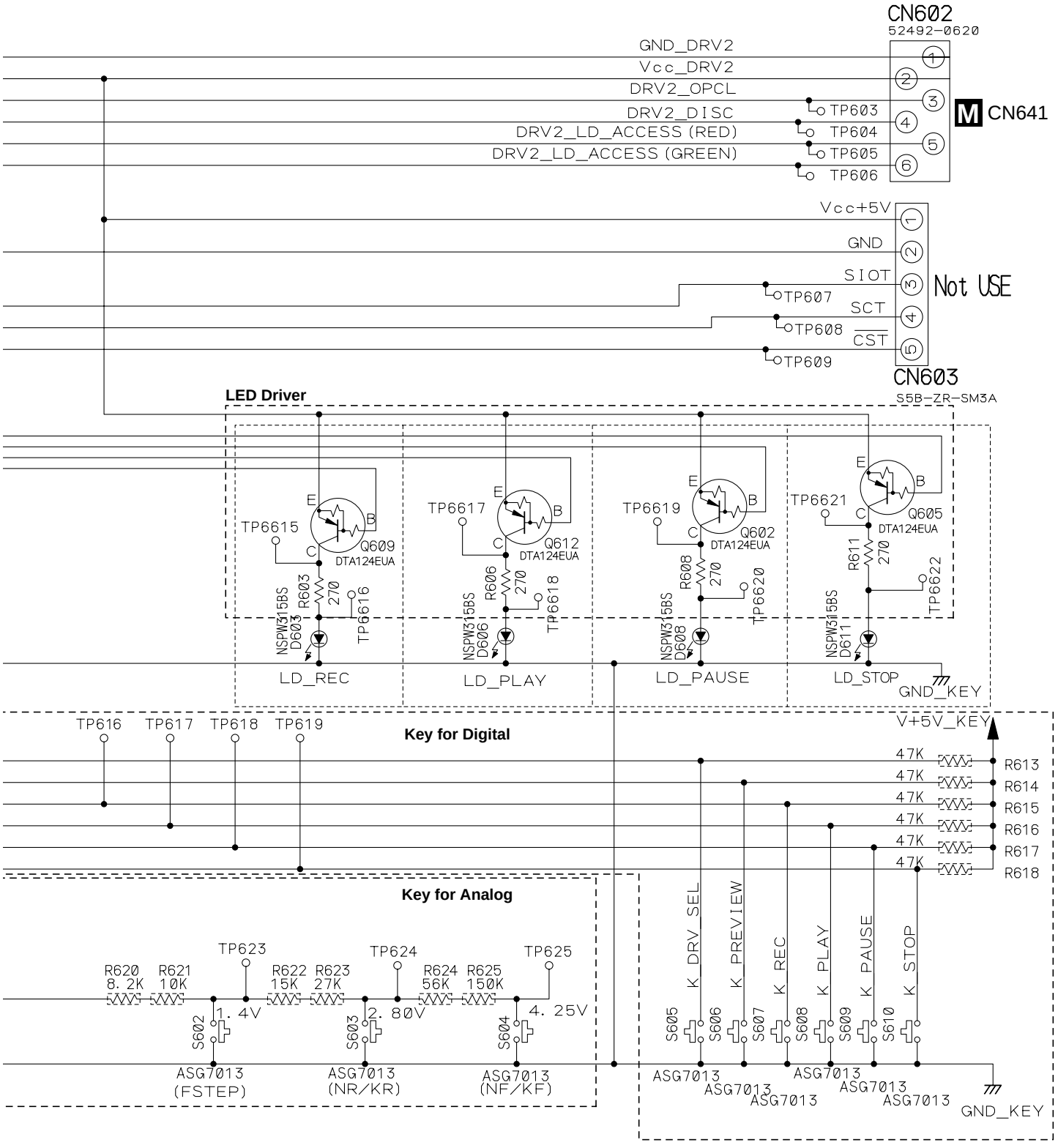


: The power supply is shown with the marked box.

3.22 KEYB ASSY

K KEYB ASSY (DWZ1108)

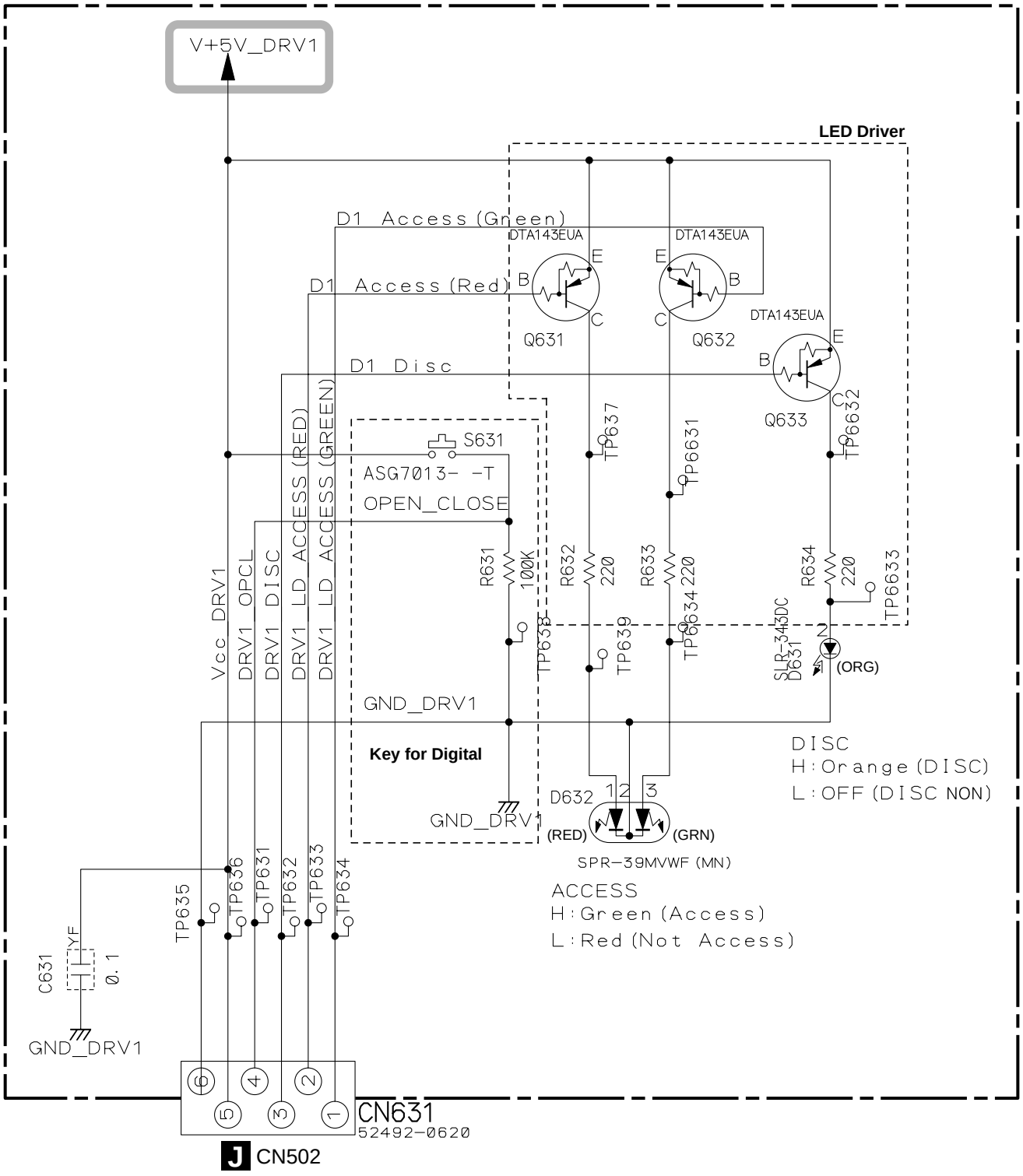




: The power supply is shown with the marked box.

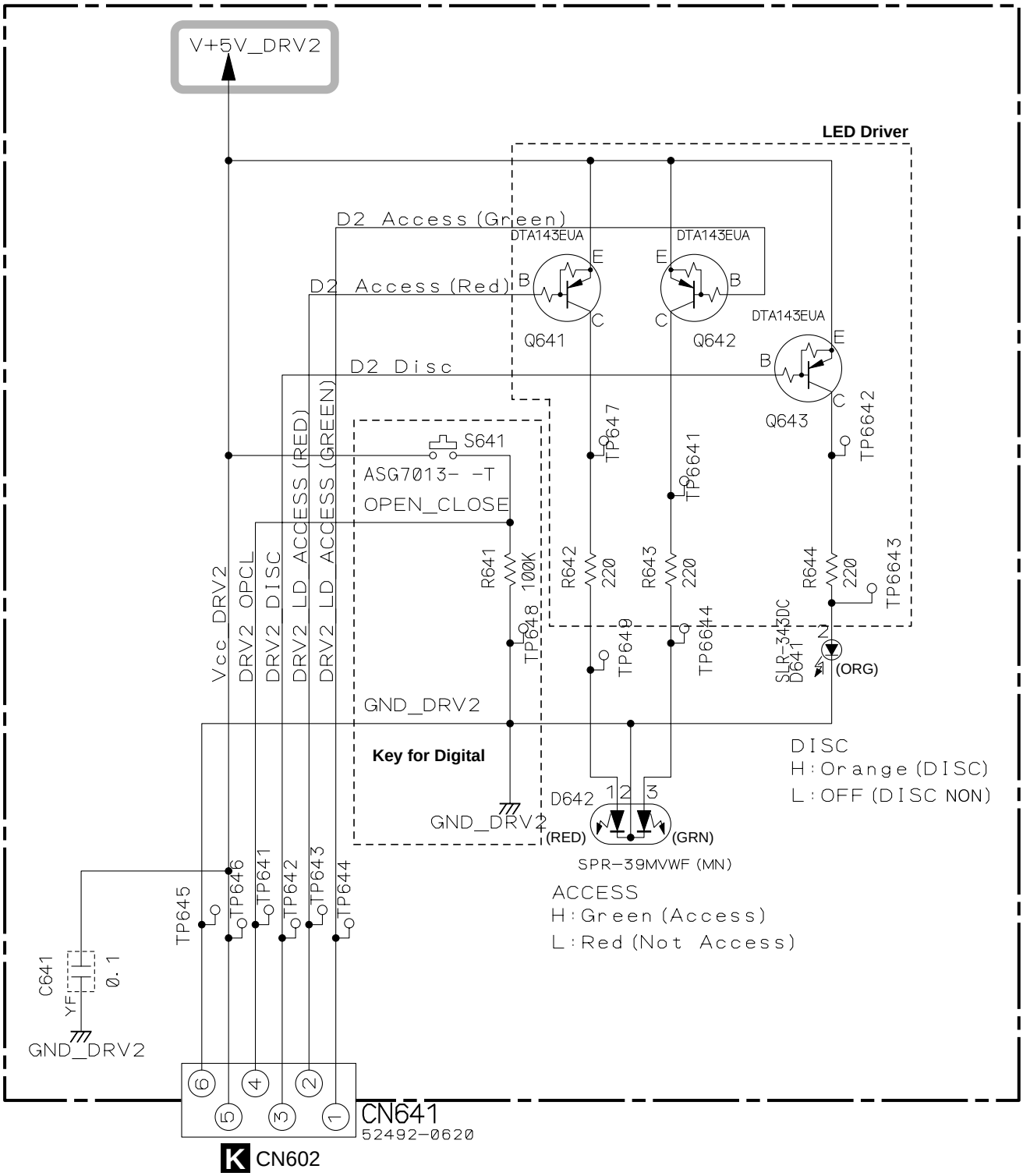
3.23 DRV1B and DRV2B ASSYS

L DRV1B ASSY (DWZ1110)



L

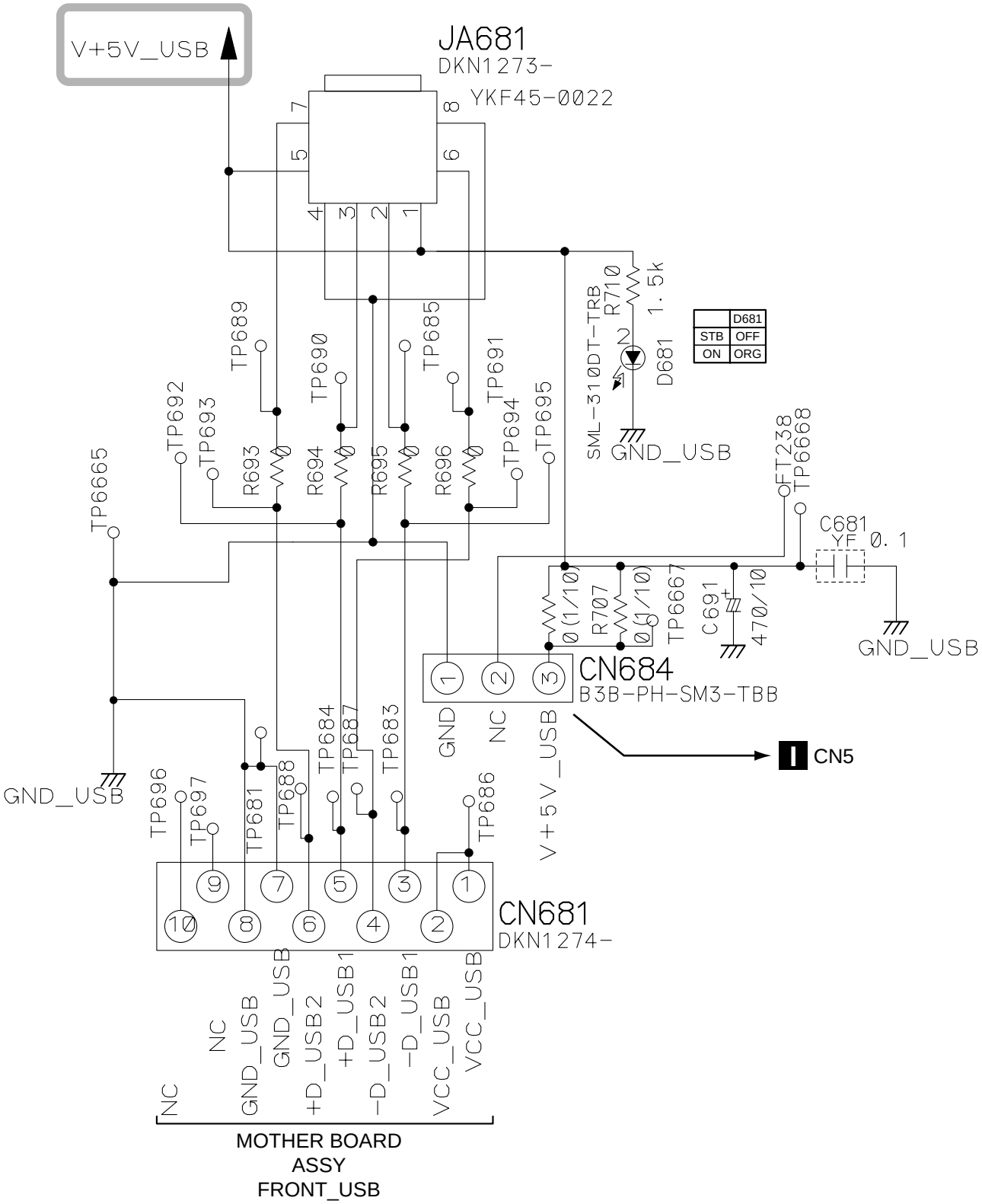
M DRV2B ASSY (DWZ1111)



: The power supply is shown with the marked box. M

3.24 USBB ASSY

N USBB ASSY (DWZ1109)



N : The power supply is shown with the marked box.

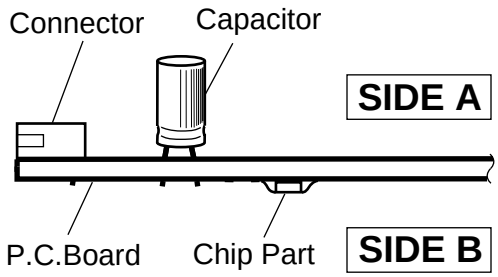
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

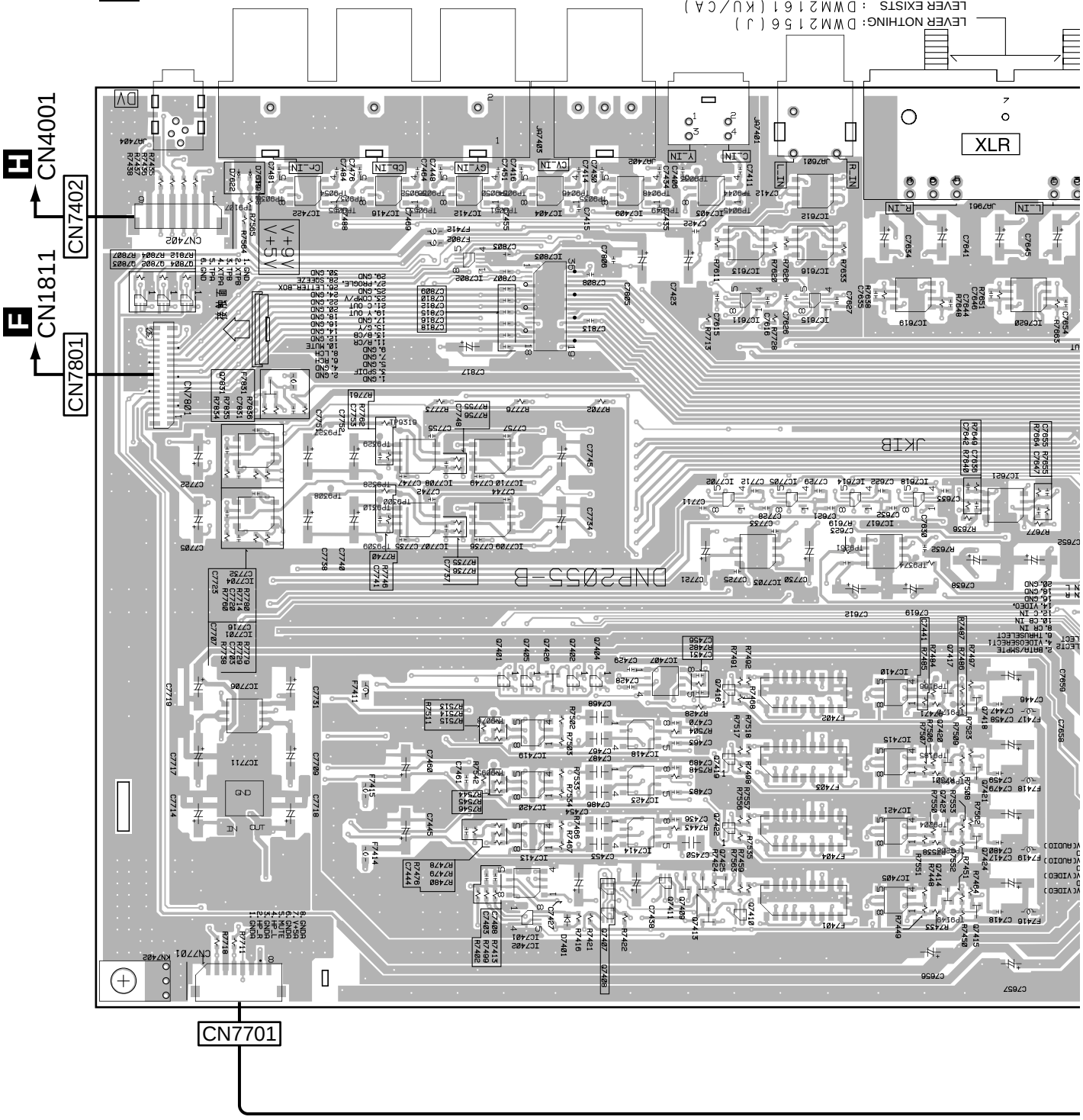
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 JKIB, JKDB, 422IB and HPVB ASSYS

SIDE A

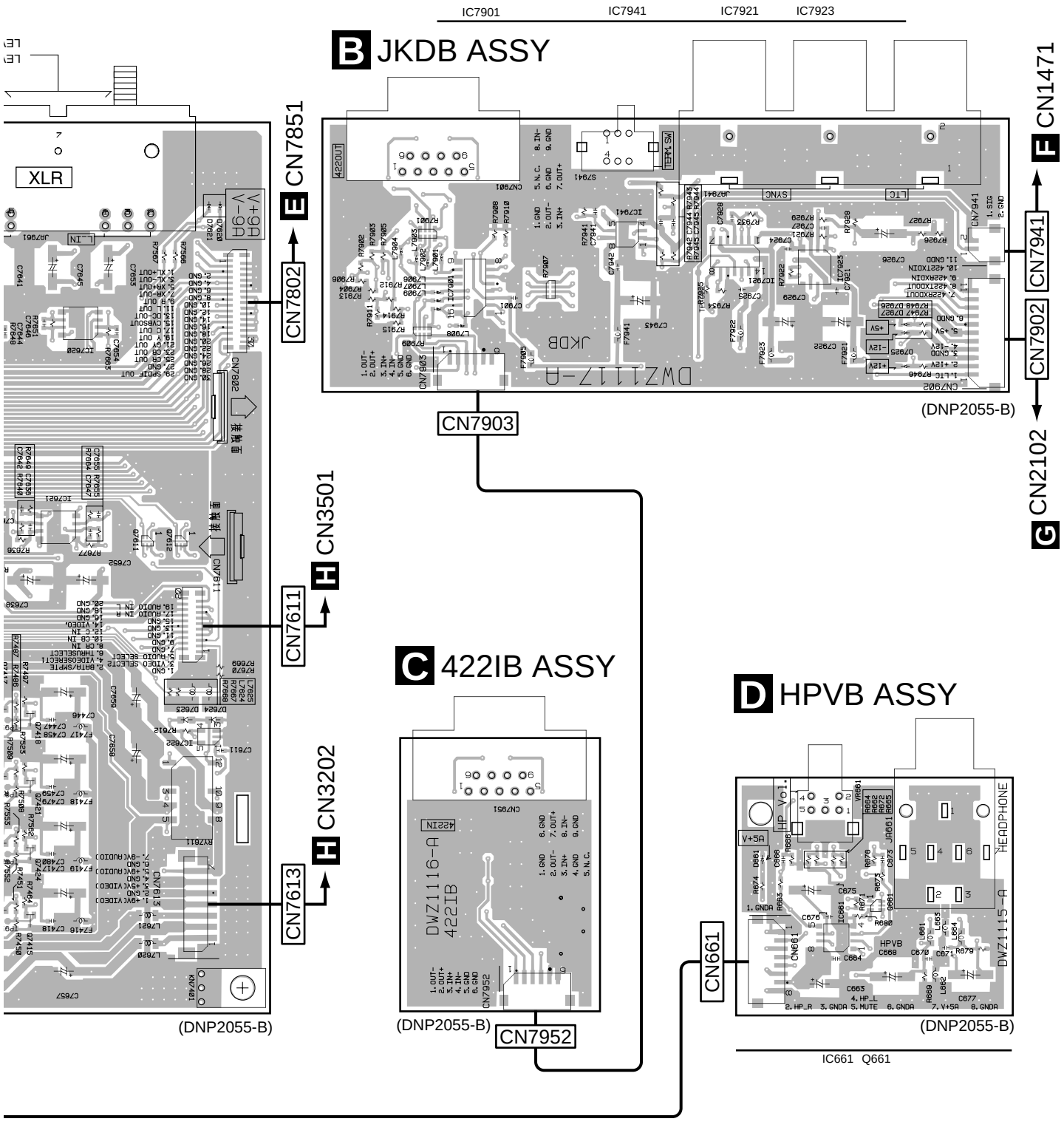
A JKIB ASSY



Q7802-Q7804 IC7422 IC7416 IC7412 IC7404 IC7409 IC7403 IC7612 IC7619 IC7620
Q7831 IC7802 IC7803 IC7613 IC7616
IC7704 IC7708 IC7710 IC7611 IC7615
IC7701 IC7707 IC7709 Q7426 IC7702 IC7705 IC7616 IC7618 IC7621
IC7711 Q7401 Q7405 Q7402 Q7404 IC7407 IC7703 IC7617
IC7419 IC7418 Q7416 IC7410 Q7417 Q7418
IC7420 IC7423 Q7419 IC7415 Q7420 Q7421
IC7413 IC7414 Q7422 IC7421 Q7423 Q7424
IC7401 Q7407 Q7425 IC7405 Q7414 Q7415
IC7402 Q7408 Q7409-Q7412

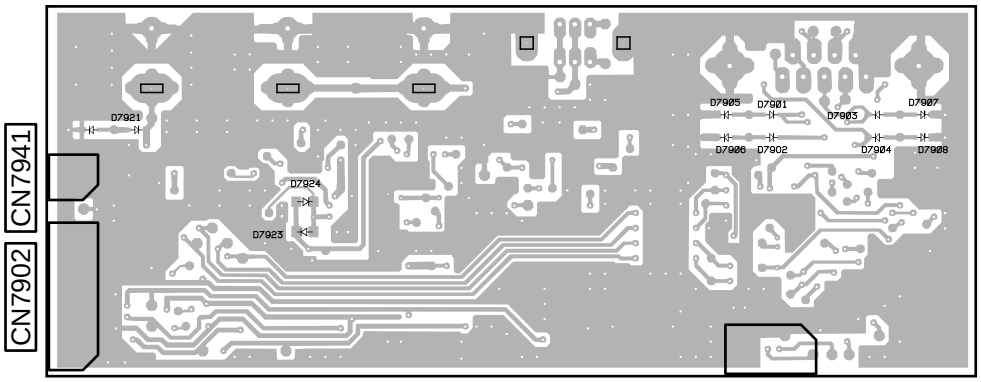
A

SIDE A


B JKDB ASSY
IC7901
IC7941
IC7921
IC7923
CN7903
(DNP2055-B)
CN1471
CN7941
CN7902
CN2102
E CN7851
CN7802
CN3501
CN7611
H CN3202
CN7613
C 422IB ASSY
CN7952
(DNP2055-B)
D HPVB ASSY
CN661
(DNP2055-B)
IC661 Q661
XLR
(DNP2055-B)
IC7620
IC7621
Q7611 Q7612
IC7622
Q7418
Q7421
Q7424
Q7415

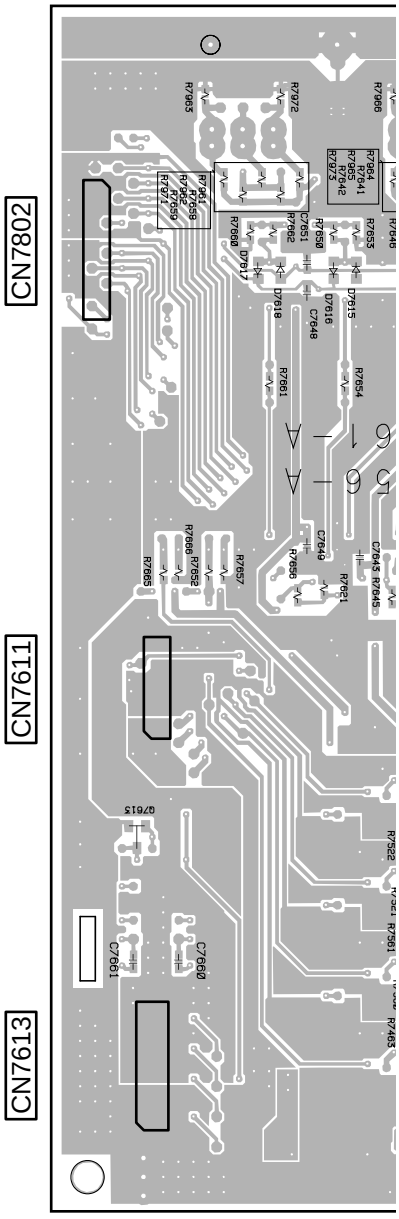
SIDE B

B JKDB ASSY



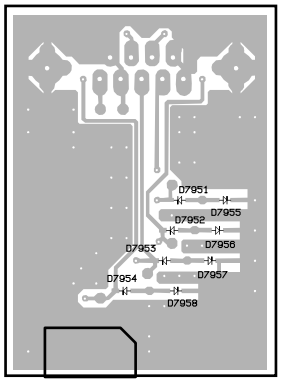
(DNP2055-B)

A JKIB ASSY



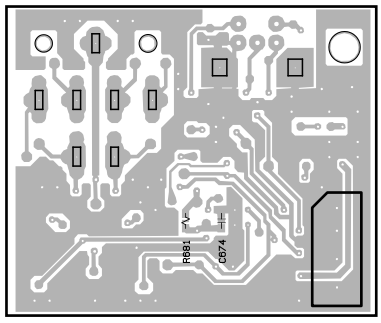
Q7613

C 422IB ASSY



CN7952 (DNP2055-B)

D HPVB ASSY

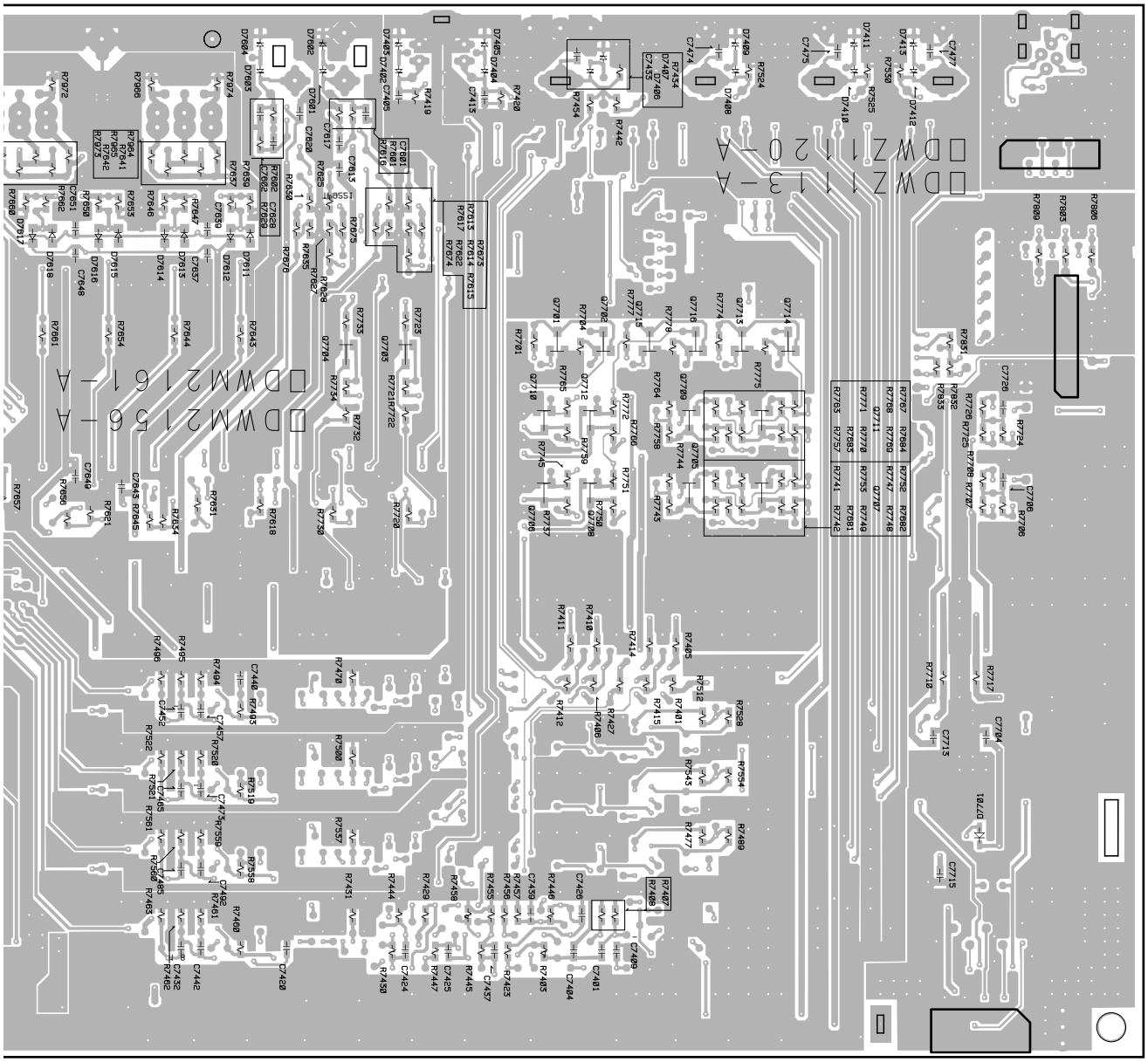


(DNP2055-B)

A B C D

SIDE B

ASSY



(DNP2055-B)

Q7704 Q7703 Q7701 Q7702 Q7715 Q7716 Q7713 Q7714
Q7710 Q7712 Q7709 Q7711
Q7706 Q7708 Q7705 Q7707

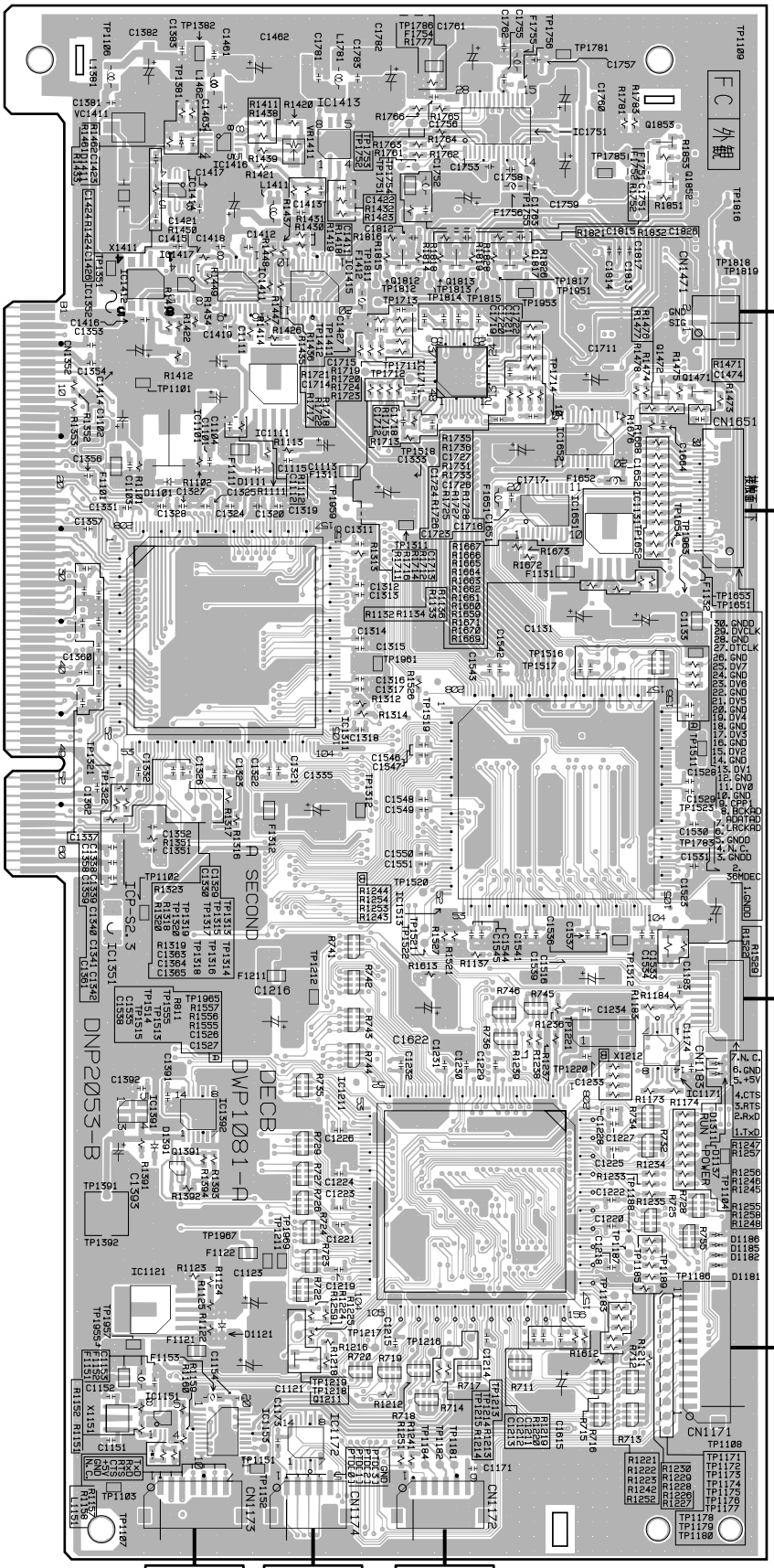
4.2 DECB ASSYS

SIDE A

F DECB ASSY

SIDE A

IC1751
IC1416 IC1413 Q1853 VC1411 VR1411
IC1414 Q1852
Q1812 Q1813 Q1817
IC1417 IC1411 IC1415
IC1412
IC1452
IC1111 IC1711
Q1472 Q1471
IC1101 IC1652
IC1651
IC1131
IC1311
IC1513
IC1351
IC1391 IC1392
Q1391
IC1211
IC1121
Q1211
IC1151
IC1153 IC1172



CN1471 → **B** CN7941
CN1651 → **H** CN6002
CN1183 → for Service
CN1171 → for Debug
CN1173 CN1174 CN1172 → for Debug

(DNP2053-B)

F **F**

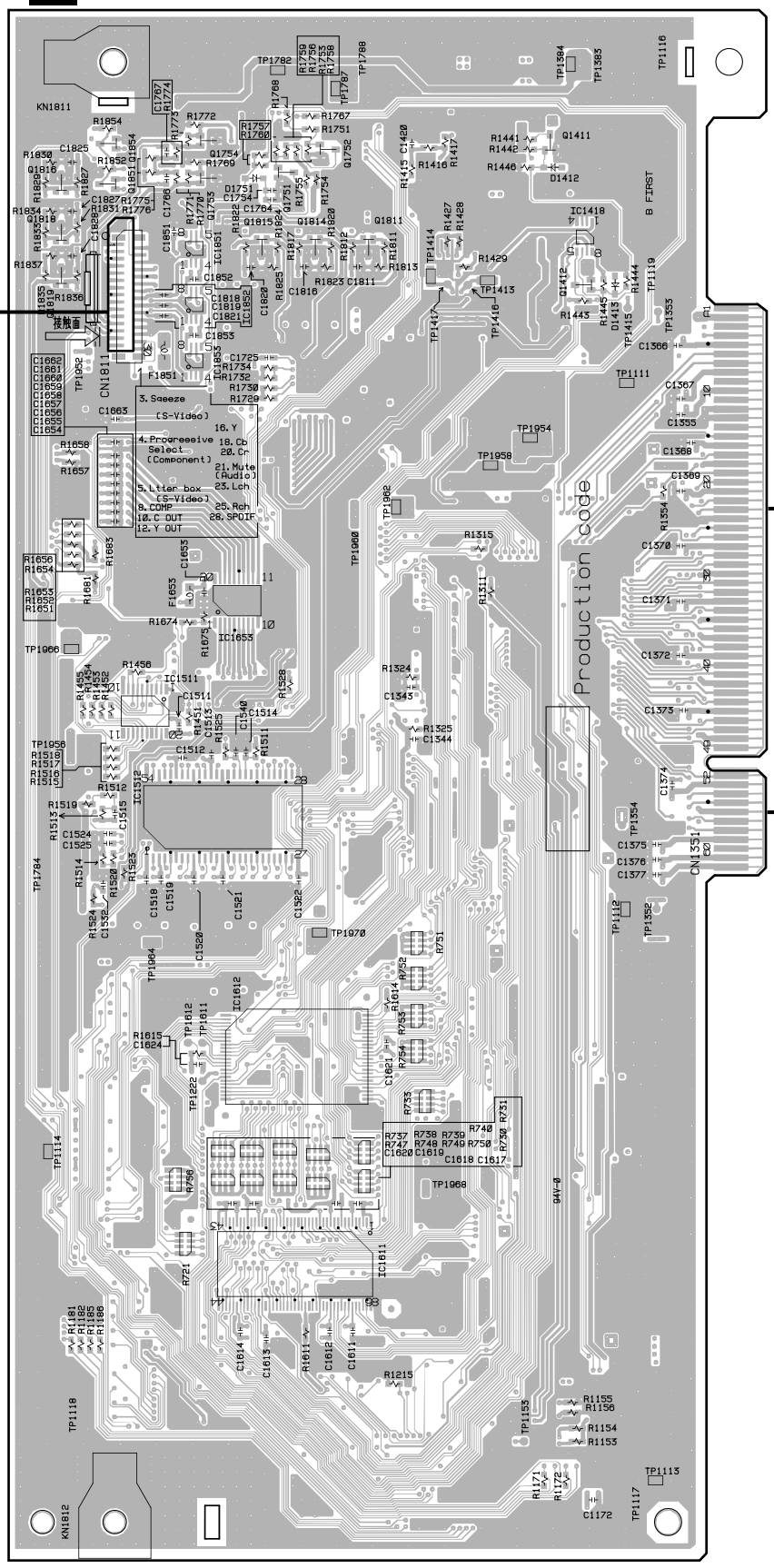
SIDE B

F DECB ASSY

SIDE B

A CN7801

CN1811

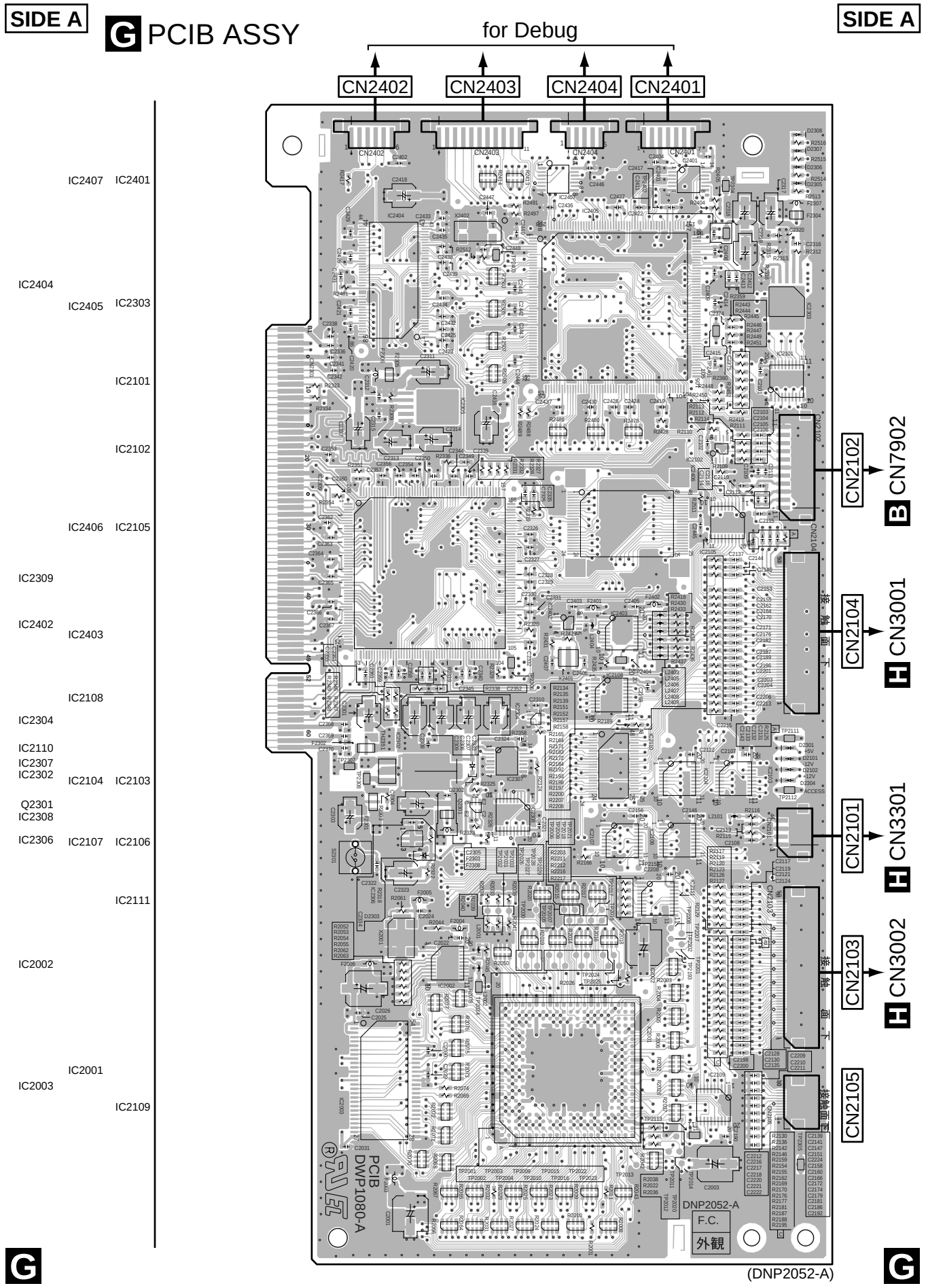


MOTHER BOARD ASSY
J2 (PCI SLOT)

Q1854 Q1754 Q1411
Q1752
Q1751
Q1816 Q1753
Q1851
Q1818 Q1815 IC1418
IC1851 Q1814 Q1811
Q1819 Q1412
IC1852
IC1853
IC1653
IC1511
IC1512
IC1612
IC1611

(DNP2053-B)

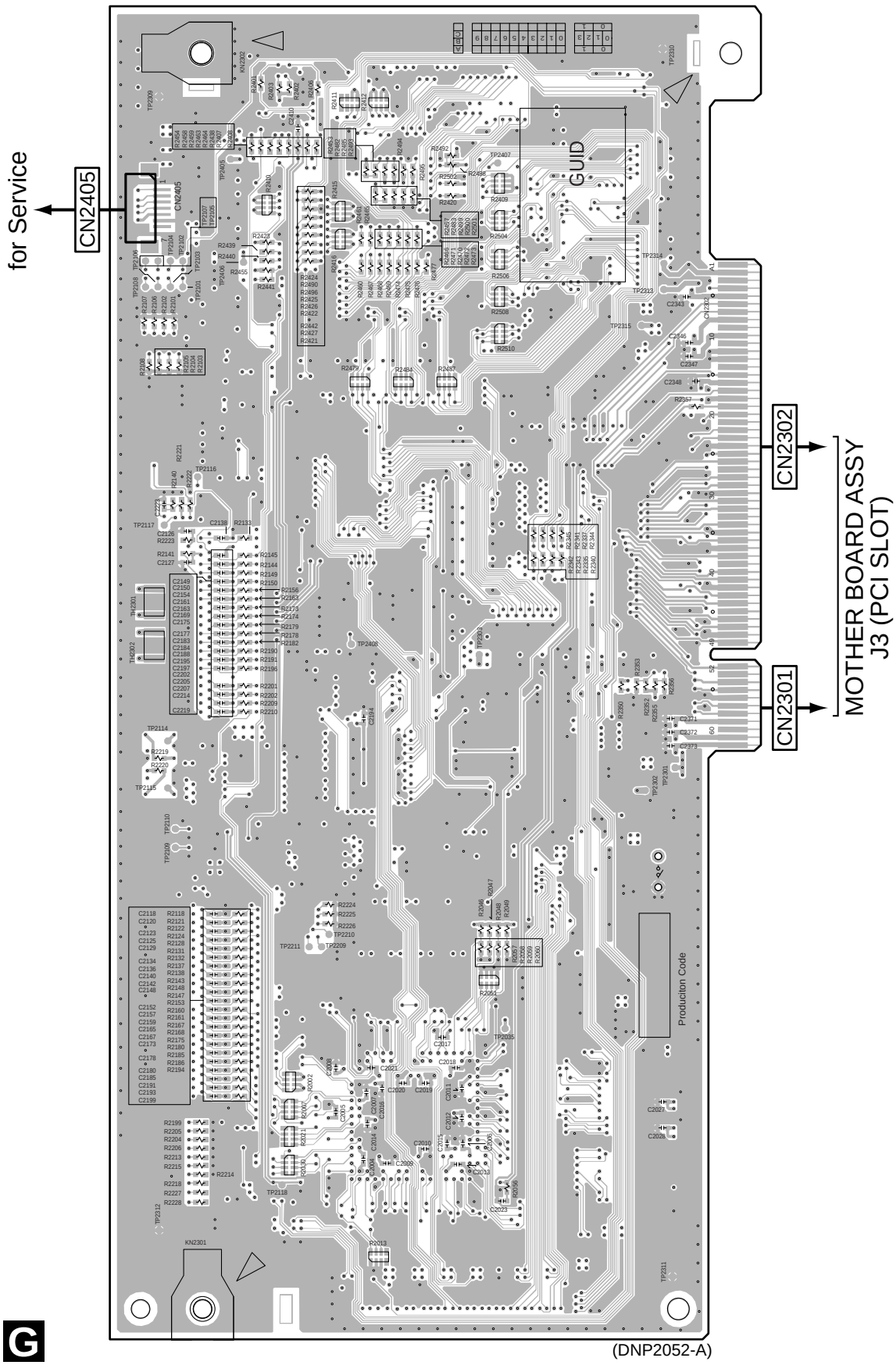
4.3 PCIB ASSY


SIDE A
G PCIB ASSY
for Debug
SIDE A
CN2402
CN2403
CN2404
CN2401
IC2407
IC2401
IC2404
IC2405
IC2303
IC2101
IC2102
IC2406
IC2105
IC2309
IC2402
IC2403
IC2108
IC2304
IC2110
IC2307
IC2302
IC2104
IC2103
Q2301
IC2308
IC2306
IC2107
IC2106
IC2111
IC2002
IC2001
IC2003
IC2109
CN2102
B CN7902
CN2104
H CN3001
CN2101
H CN3301
CN2103
H CN3002
CN2105
PCB
DWP1080-A
DNP2052-A
F.C.
外観
(DNP2052-A)

SIDE B

SIDE B

G PCIB ASSY



(DNP2052-A)

G

G

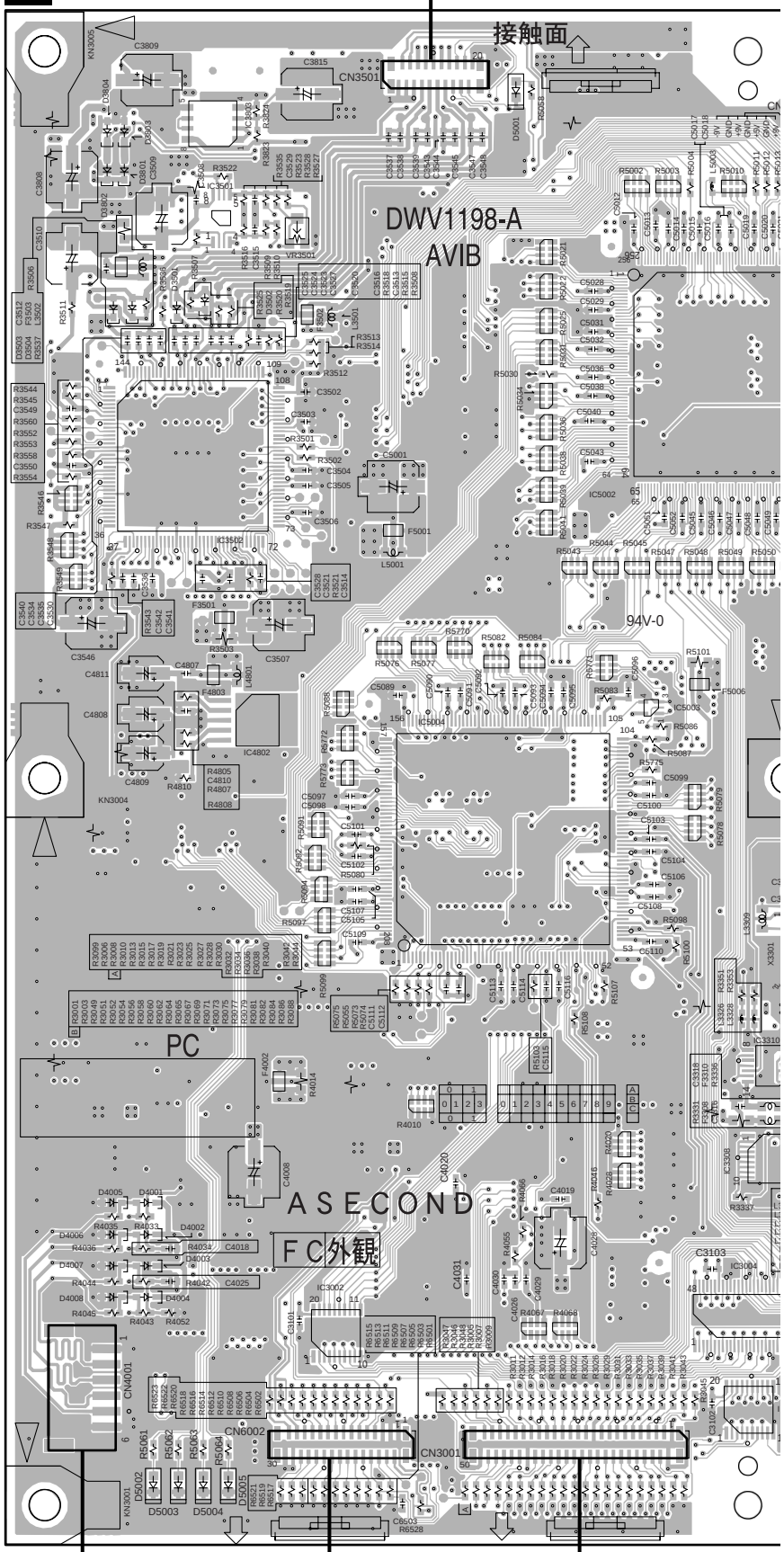
PRV-LX1

4.4 AVIB ASSY

SIDE A

H AVIB ASSY

CN3501 → **A** CN7611



IC3201 IC3202
IC3803
IC3501 IC3203 IC3204 VR3501
IC5002
IC3502 IC6002
IC5003
IC4802 IC7501
IC5004
IC3302
VC3301
IC3303
IC3310 IC3307
IC3308
IC7004
IC3004 IC3002 IC3304 IC3005 IC3006
IC3003
IC3007

H

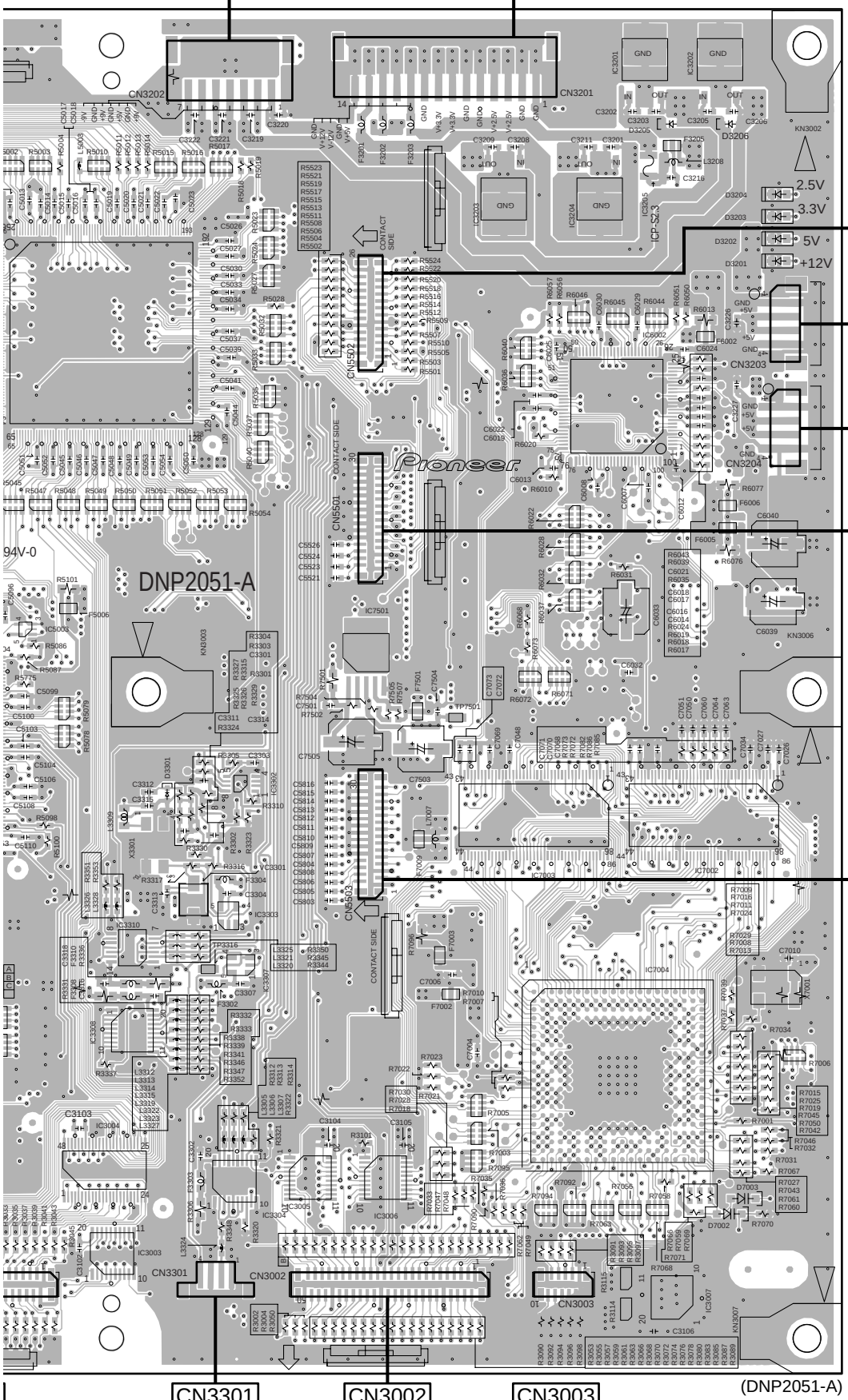
CN4001 → **A** CN7402

CN6002 → **F** CN1651

CN3001 → **G** CN2104

611 CN3202 → A CN7613 CN3201 → I CN2

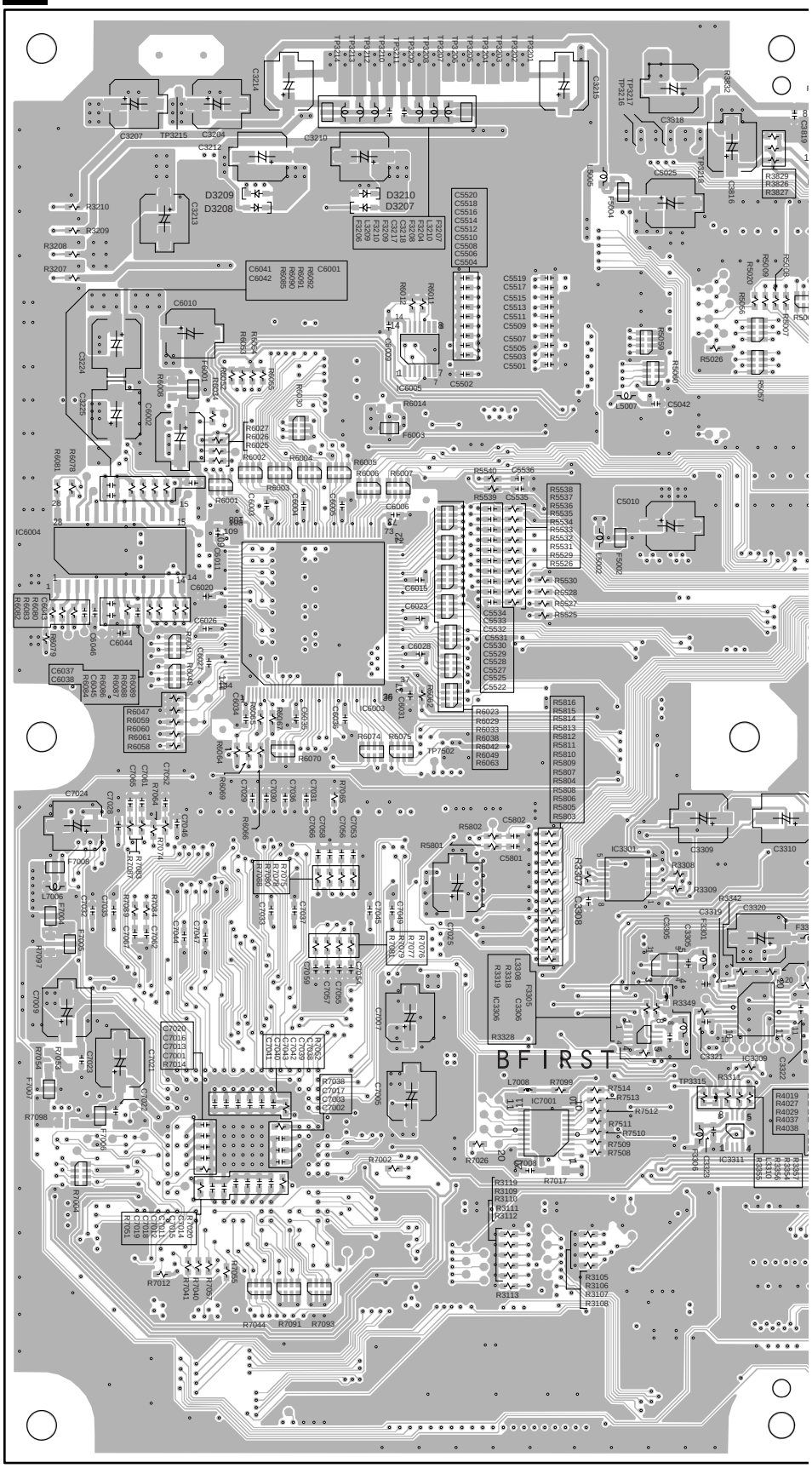
SIDE A



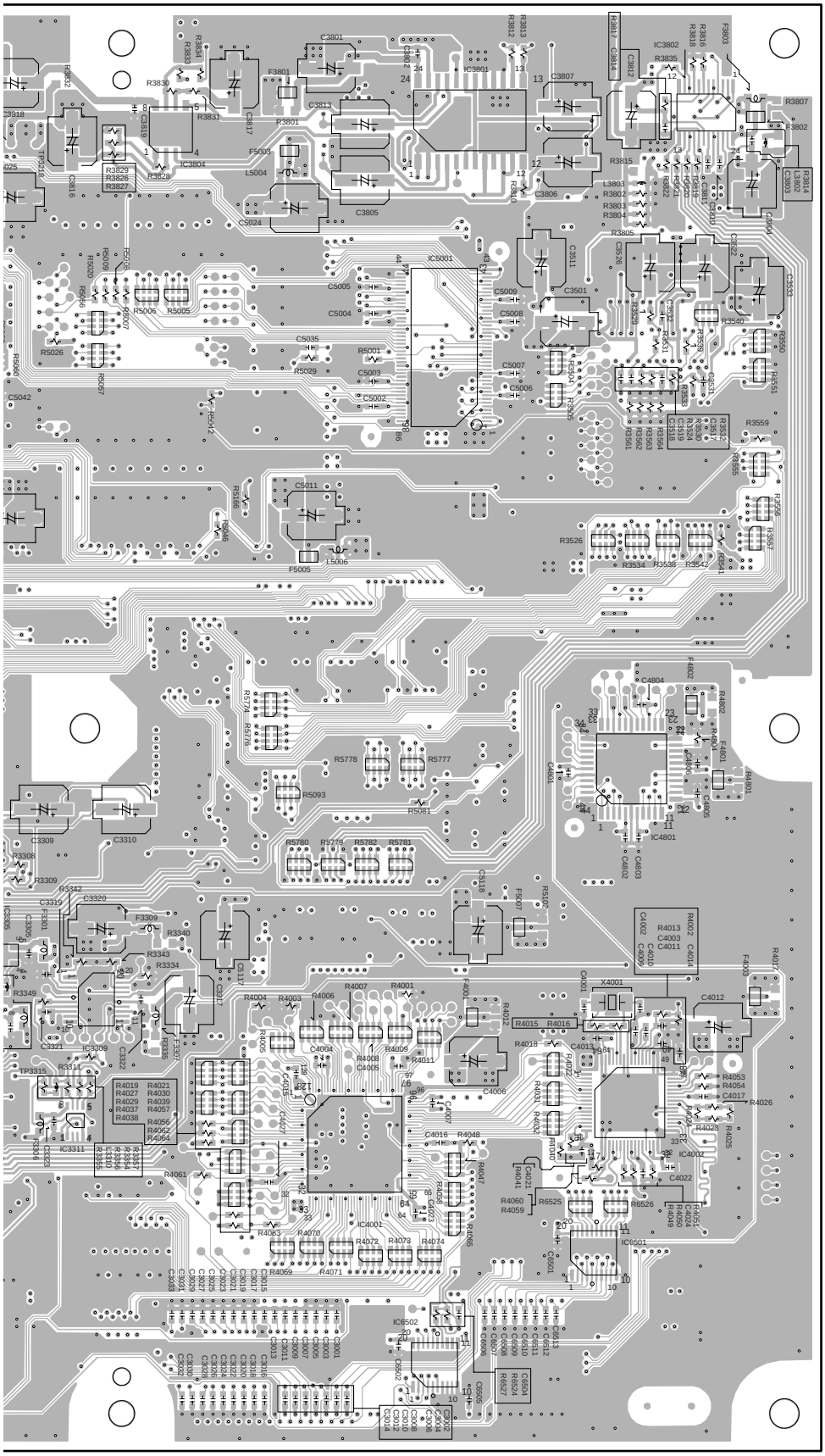
604 G CN2101 G CN2103

SIDE B

H AVIB ASSY



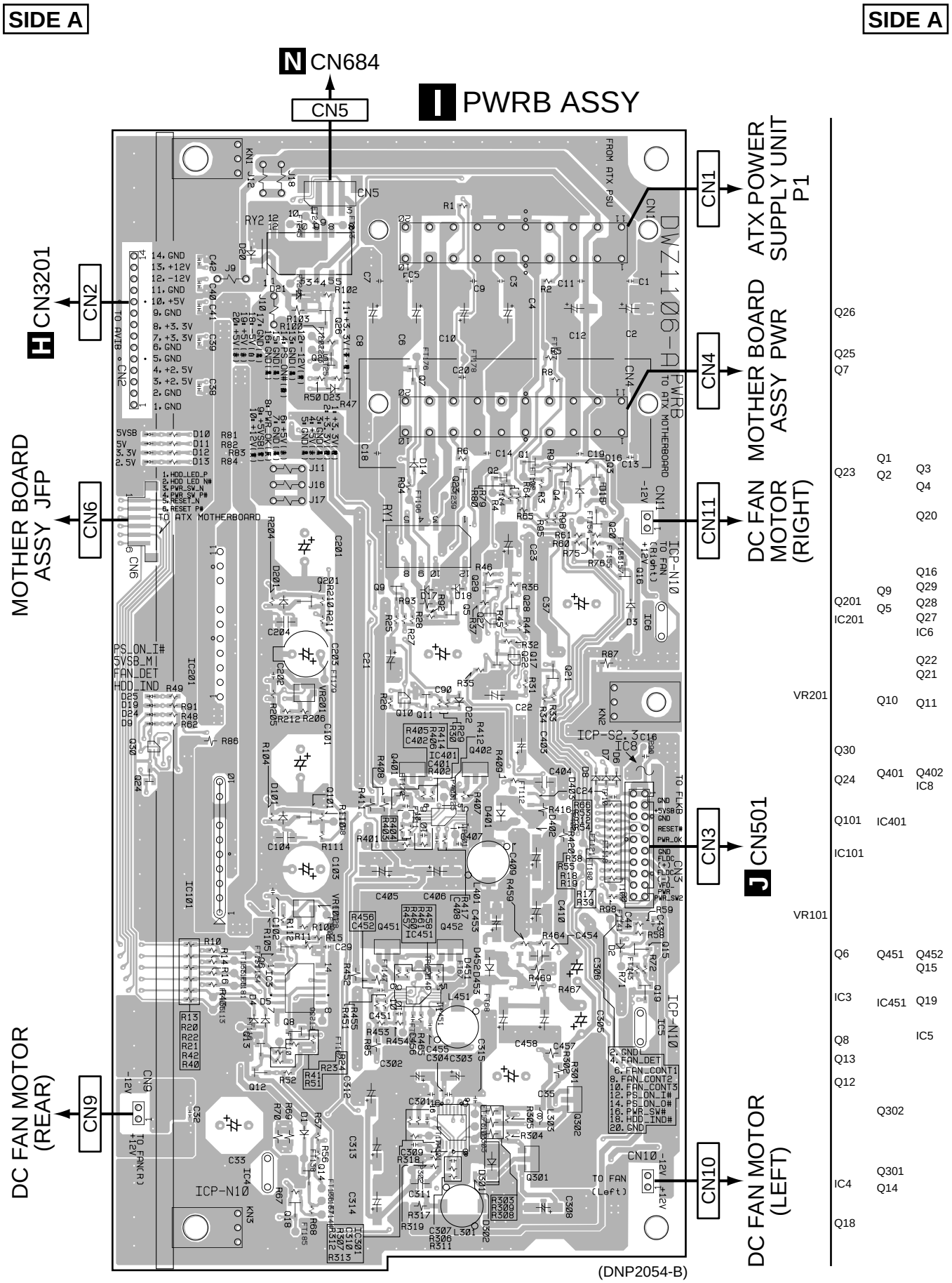
SIDE B



(DNP2051-A)

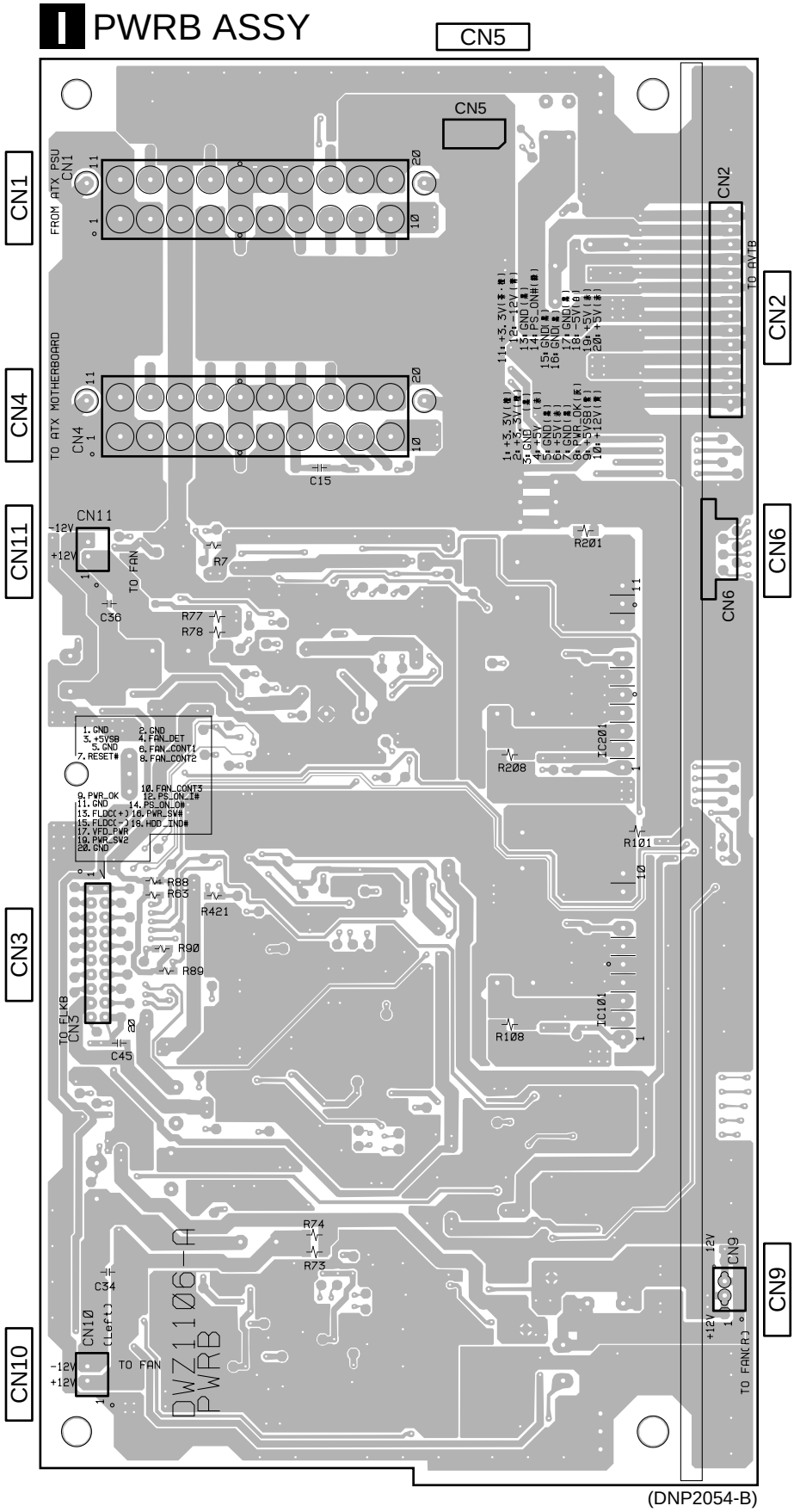
IC3801 IC3802 IC3804 IC6005 IC5001 IC6004 IC6003 IC4801 IC3301 IC3305 IC3309 IC3306 IC4002 IC7001 IC3311 IC4001 IC6501 IC6502

4.5 PWRB ASSY


SIDE A
SIDE A
N CN684
CN5
I PWRB ASSY
H CN3201
CN2
MOTHER BOARD ASSY JFP
CN6
DC FAN MOTOR (REAR)
CN9
CN1
ATX POWER SUPPLY UNIT P1
CN4
MOTHER BOARD ASSY PWR
CN11
DC FAN MOTOR (RIGHT)
CN3
J CN501
CN10
DC FAN MOTOR (LEFT)
DWZ1106-A PWRB
TO ATX MOTHERBOARD
FROM ATX PSU
TO AVIB CN2
TO ATX MOTHERBOARD
TO FAN (Rear)
TO FAN (Right)
TO FAN (Left)
TO FLKB
ICP-N10
ICP-S2.3
ICP-N10
(DNP2054-B)

SIDE B

PWRB ASSY

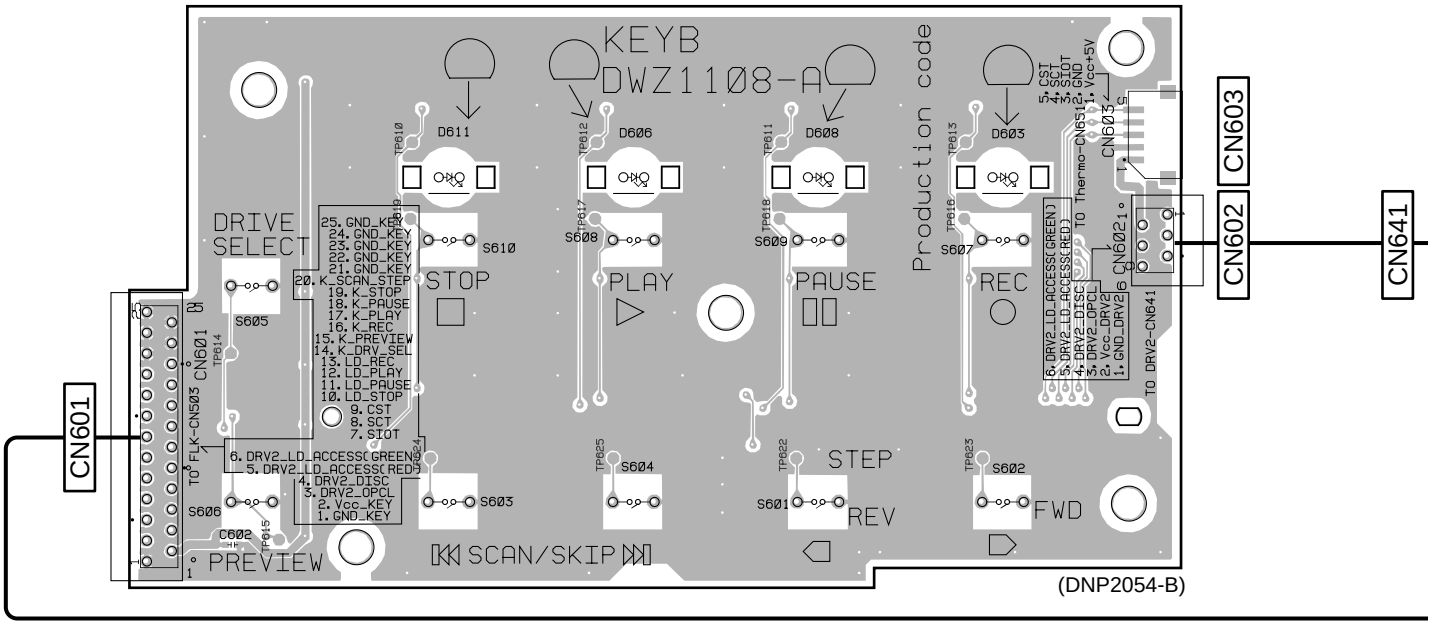


(DNP2054-B)

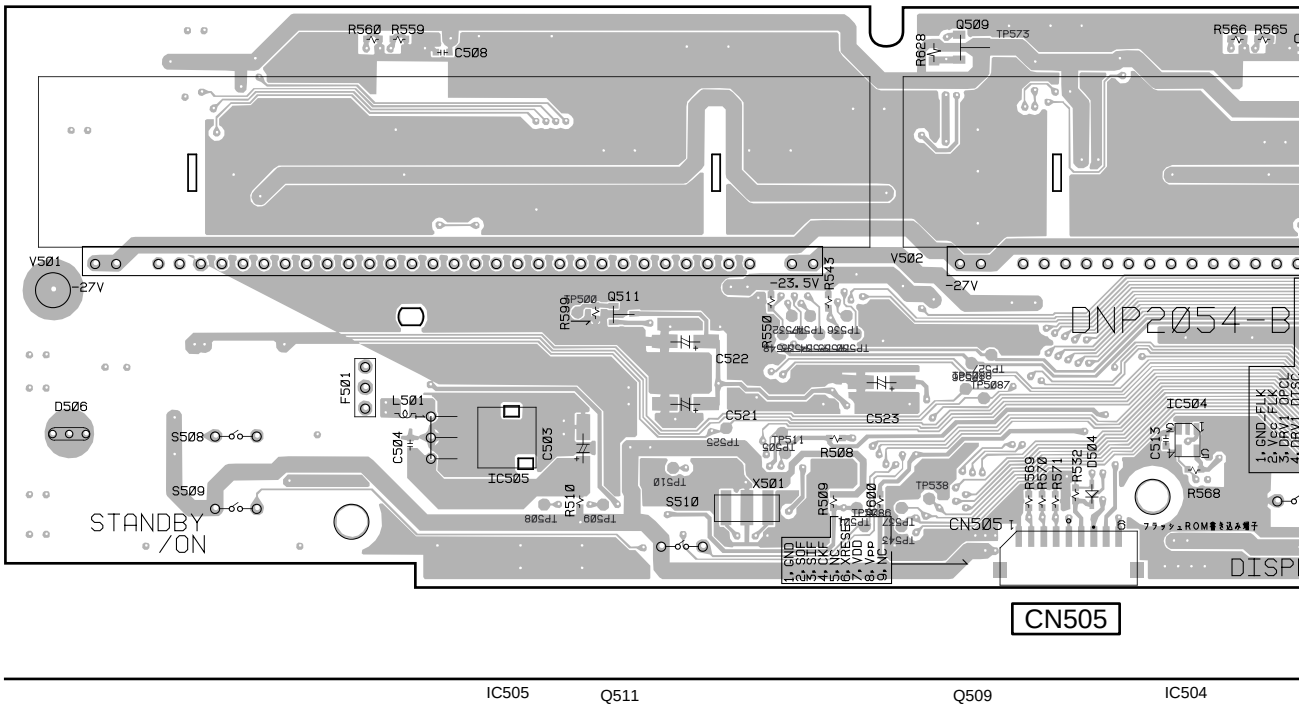
4.6 FLKB, KEYB, DRV1B, DRV2B and USBB ASSYS

SIDE A

K KEYB ASSY

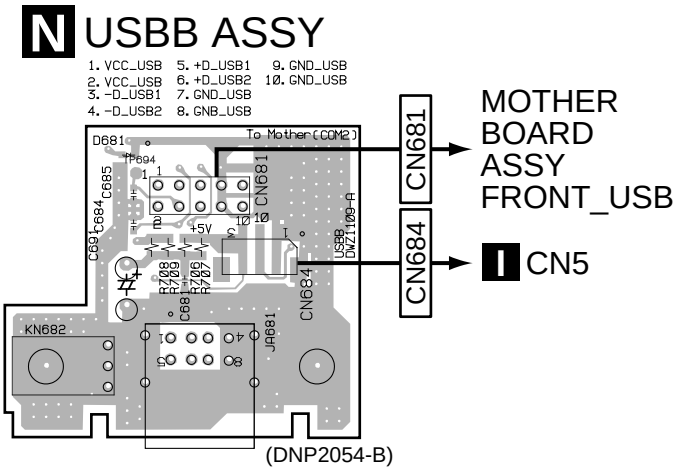


J FLKB ASSY



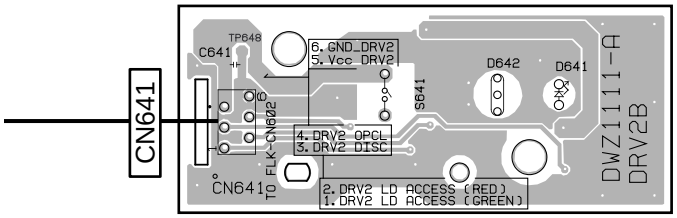
SIDE A

N USBB ASSY

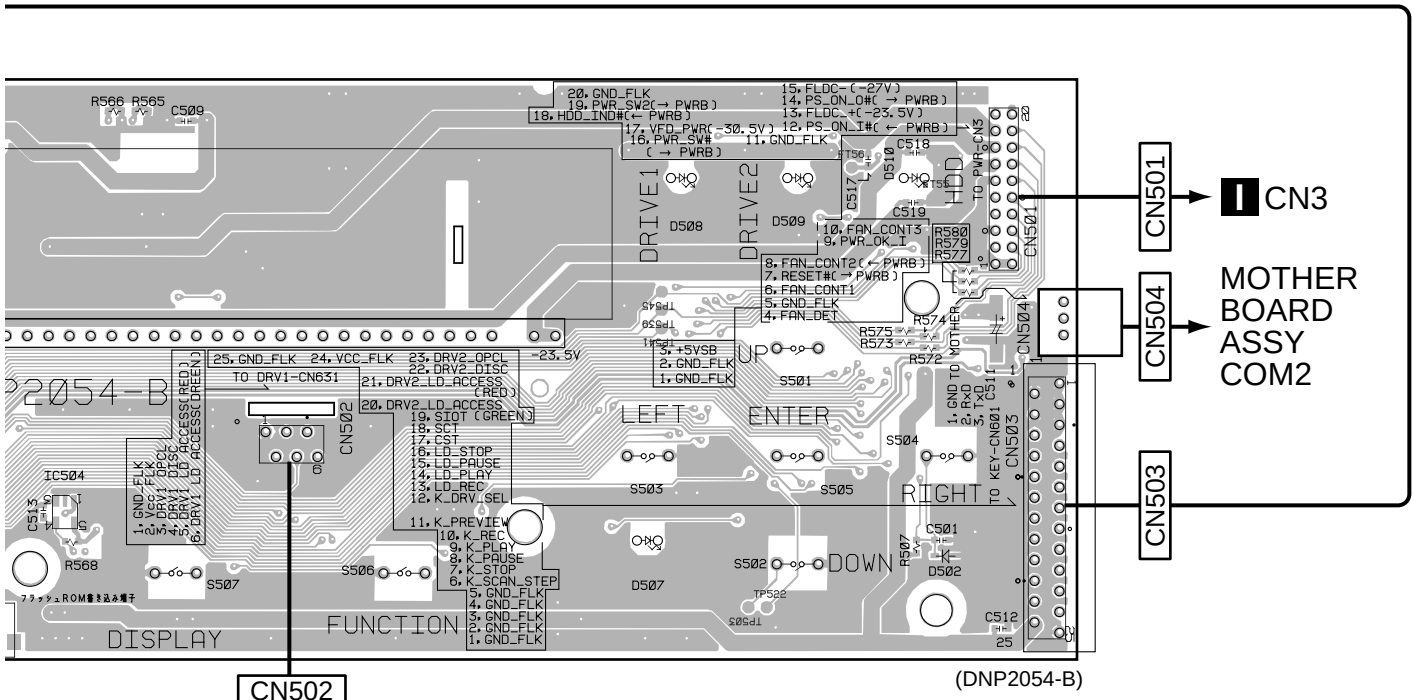


(DNP2054-B)

M DRV2B ASSY



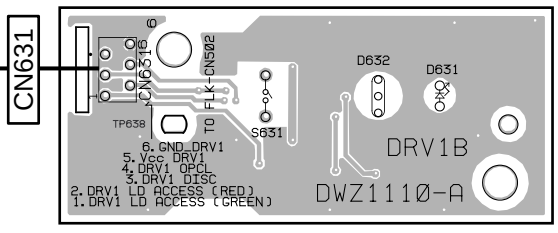
(DNP2054-B)



(DNP2054-B)

IC504

L DRV1B ASSY

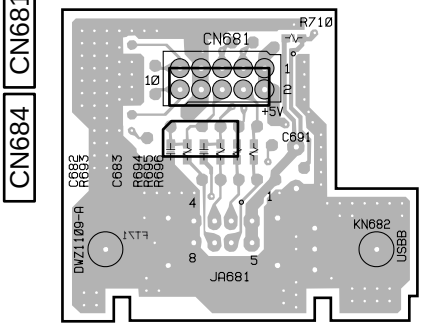


(DNP2054-A)

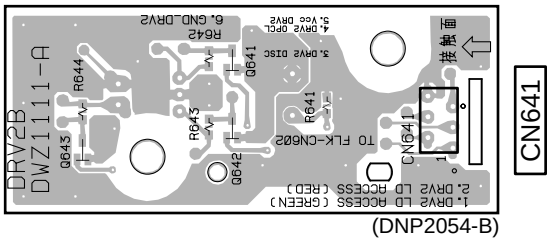
J L M N

SIDE B

N USBB ASSY

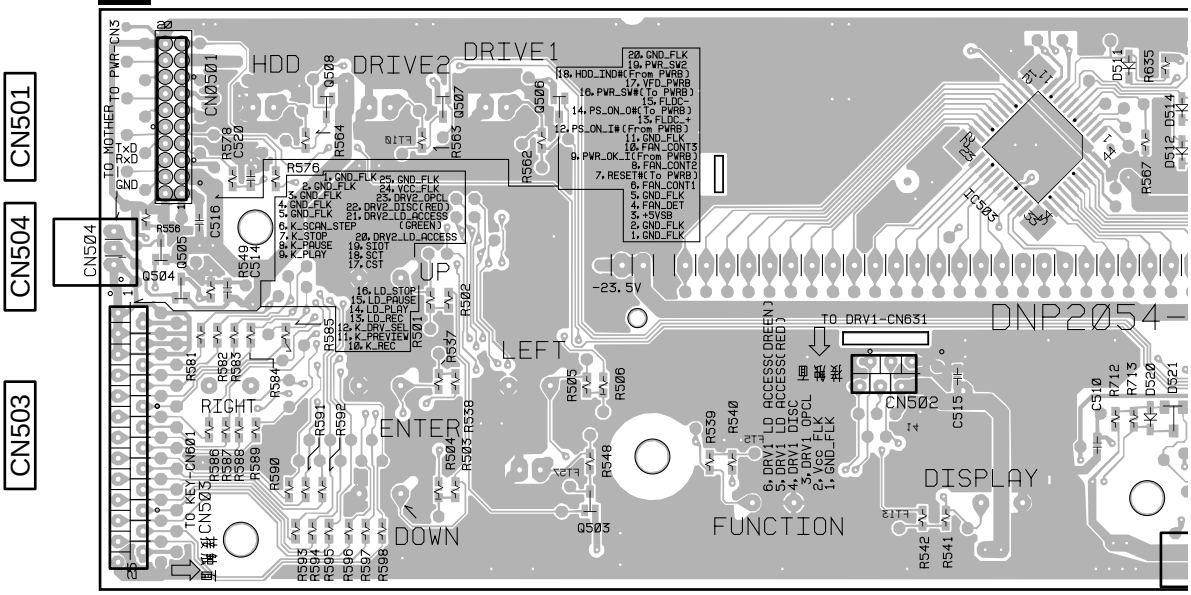


M DRV2B ASSY



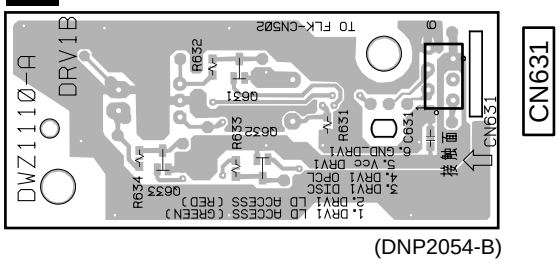
Q643 Q641 Q642

J FLKB ASSY



Q505 Q504 Q508 Q507 Q506 Q503 IC503

L DRV1B ASSY

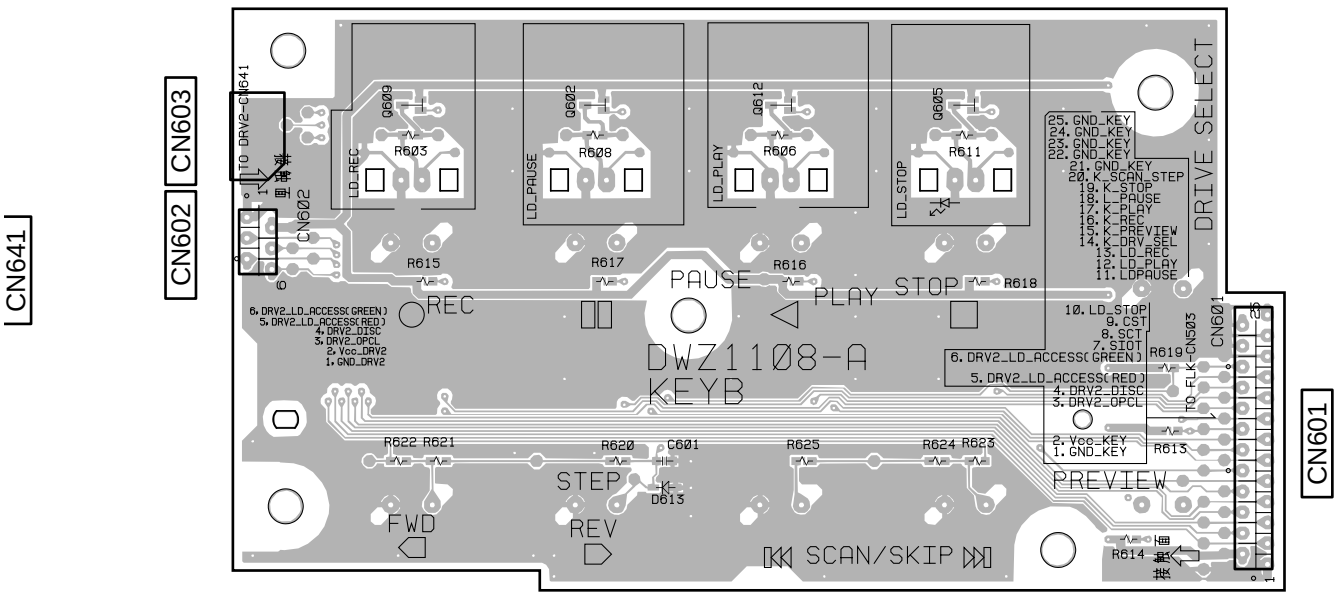


Q631 Q633 Q632

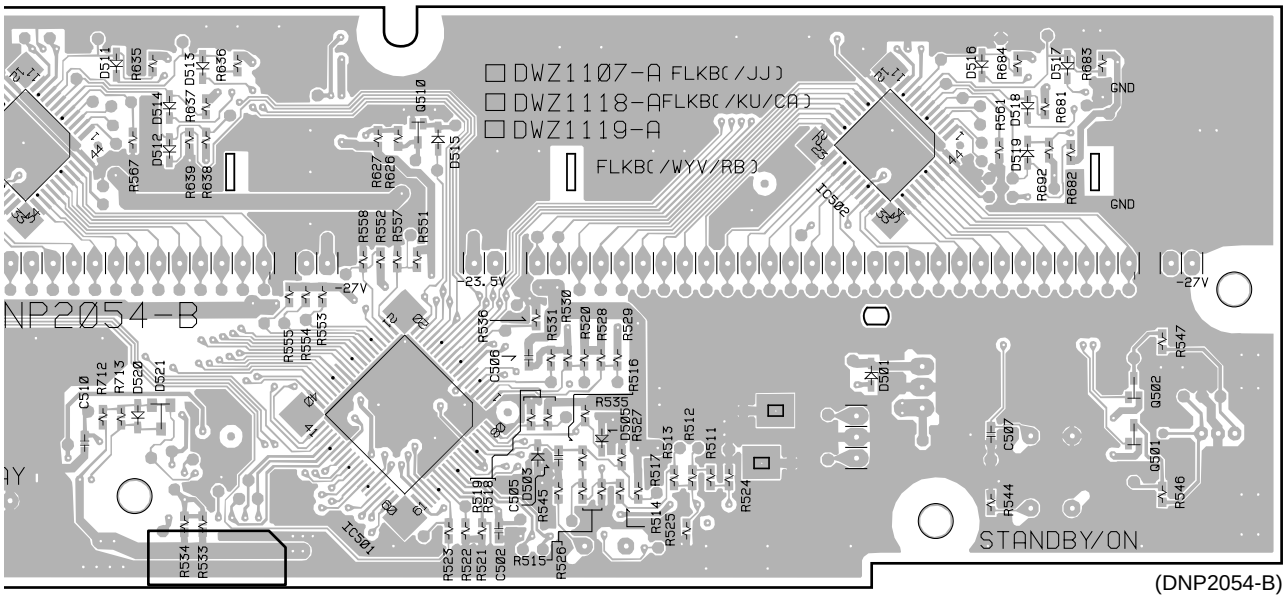
J L M N

Q609 Q602 Q612 Q605

K KEYB ASSY



(DNP2054-B)



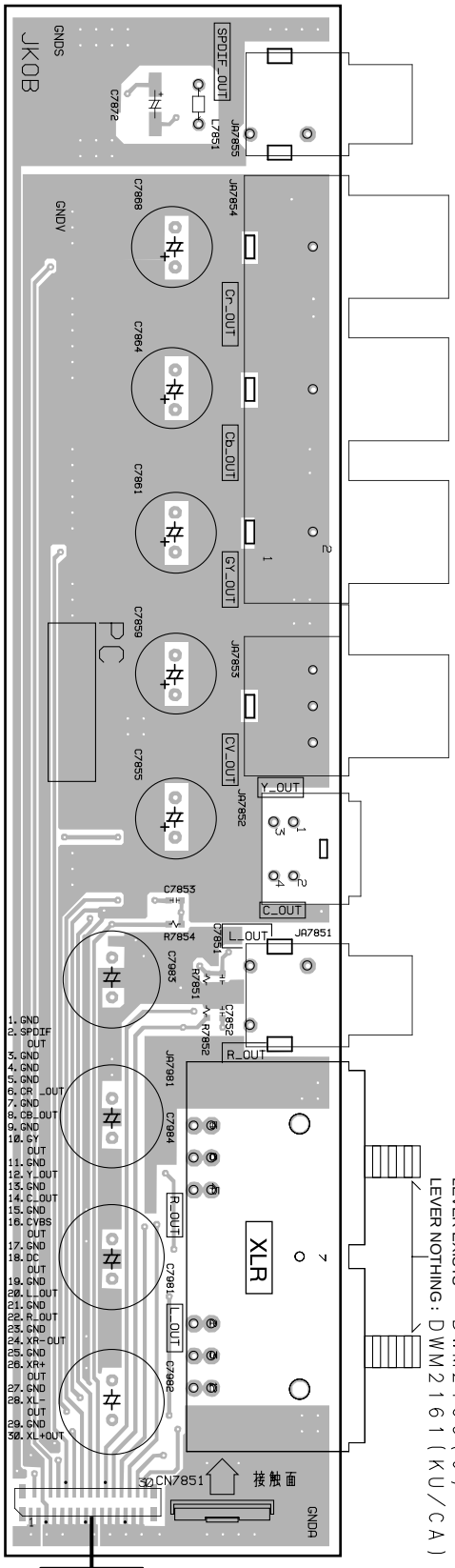
(DNP2054-B)

C503 Q510 IC501 IC502 Q502 Q501

4.7 JKOB ASSY

SIDE A

E JKOB ASSY

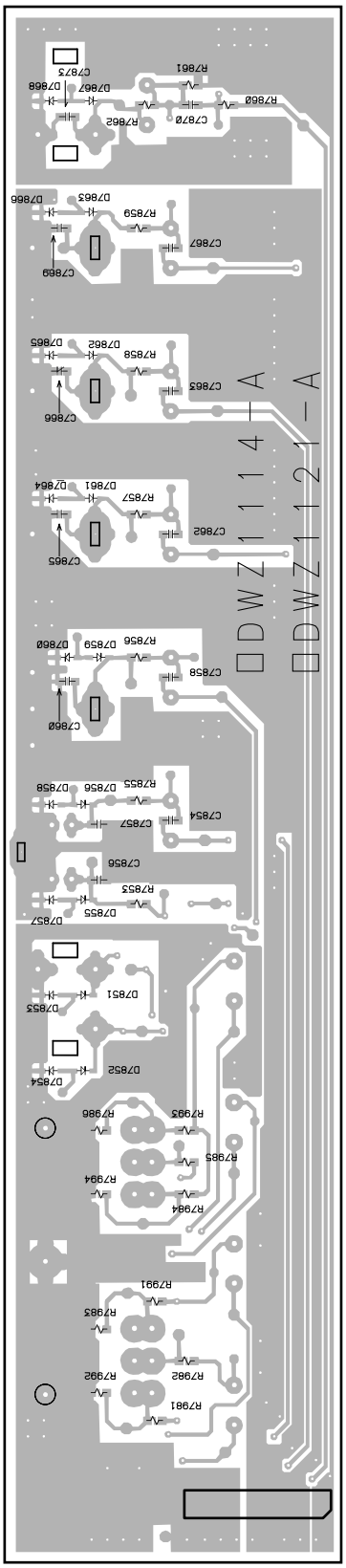


CN7851 (DNP2055-B)

E **A** CN7802

SIDE B

E JKOB ASSY

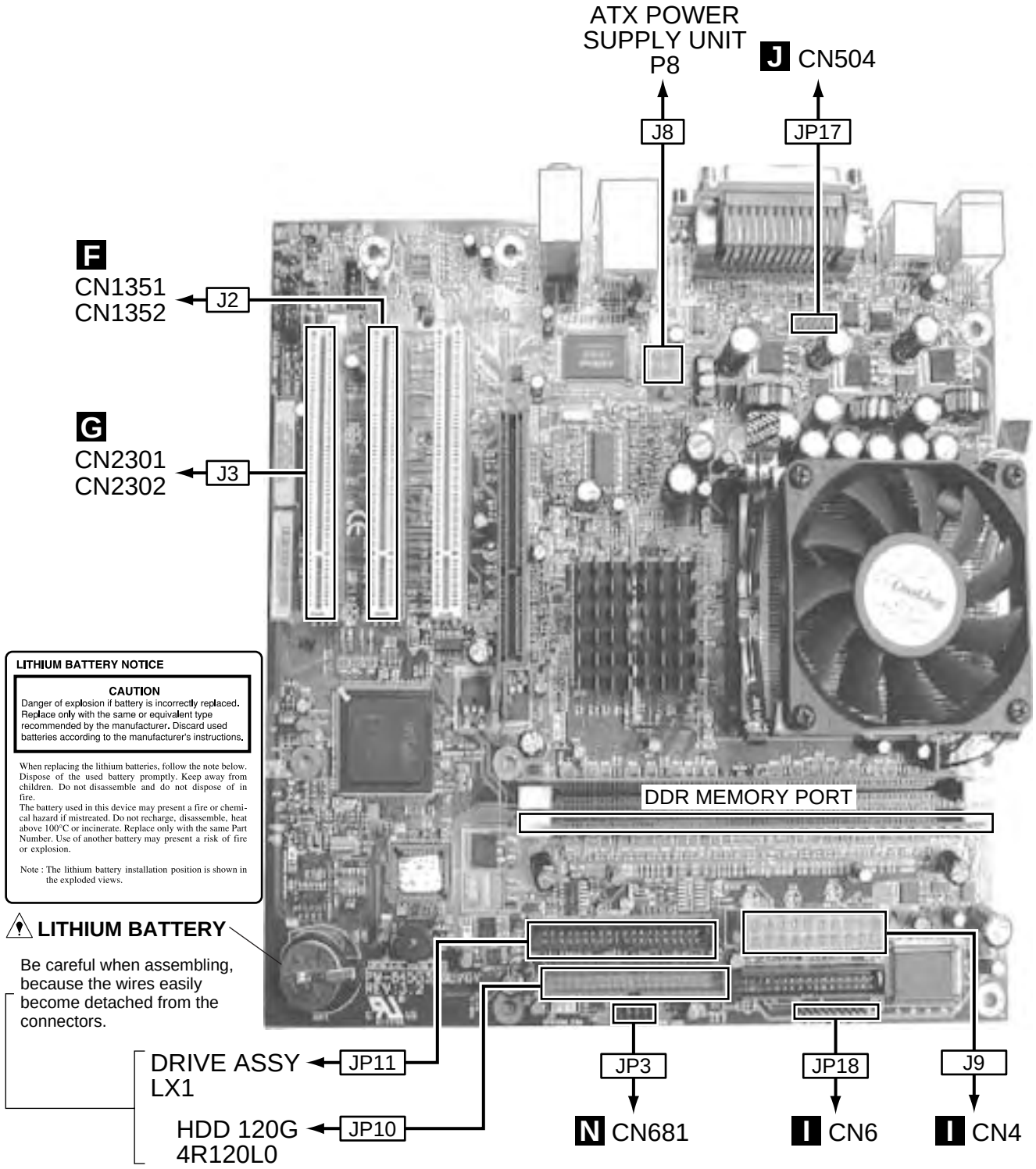


(DNP2055-B) CN7851

E

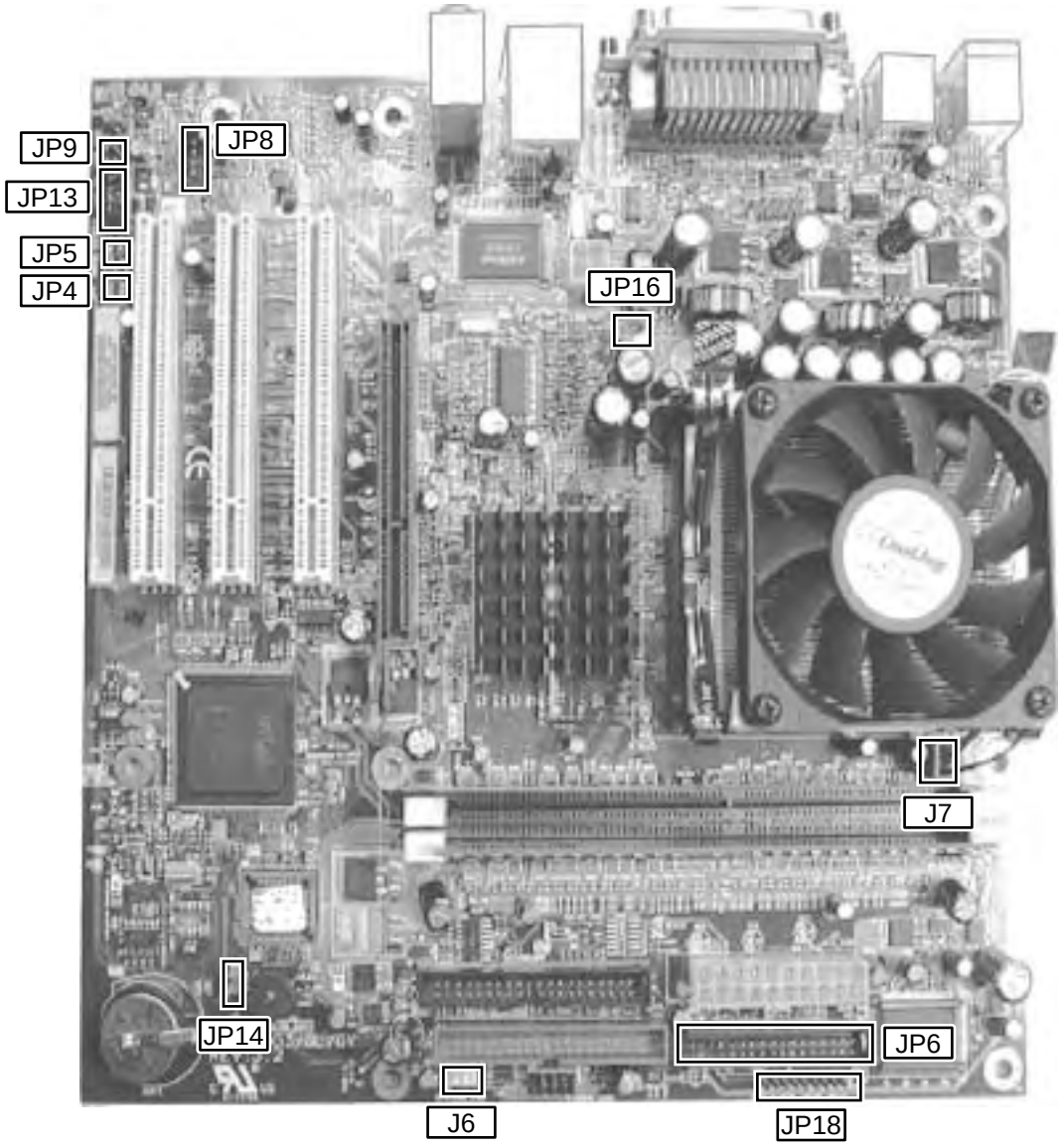
4.8 MOTHER BOARD ASSY

Connection Diagram of the MOTHER BOARD ASSY


ATX POWER SUPPLY UNIT
P8
J8
J CN504
JP17
F
CN1351
CN1352
J2
G
CN2301
CN2302
J3
LITHIUM BATTERY NOTICE
CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
When replacing the lithium batteries, follow the note below. Dispose of the used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
The battery used in this device may present a fire or chemical hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate. Replace only with the same Part Number. Use of another battery may present a risk of fire or explosion.
Note : The lithium battery installation position is shown in the exploded views.
LITHIUM BATTERY
Be careful when assembling, because the wires easily become detached from the connectors.
DDR MEMORY PORT
DRIVE ASSY LX1
JP11
HDD 120G 4R120L0
JP10
JP3
JP18
J9
N CN681
I CN6
I CN4

J8 (DKP3656): For CPU_12 V.
The connector has a different shape to prevent erroneous connection.
J9 (DKP3657): For ATX power supply.
The connector has a different shape to prevent erroneous connection.
JP3 (DKP3646): For USB.
The black tube is attached to the cable on the side of the Motherboard.
The connector is designed to prevent erroneous connection to a 9-pin connector.
JP10 (DKP3647): For the IDE Primary (HDD).
The connector has a different shape to prevent erroneous connection.
JP11 (DKP3648): For the IDE Secondary (DVD drive).
The connector has a different shape to prevent erroneous connection.
JP17 (DKP3645): For COM2.
To prevent erroneous connection to a 10-pin connector, some of the pin holes are filled.
JP18 (DKP3635): For FPIO.
Be careful of the direction. Align the white mark with Pin 1.
Make sure that the cable is not twisted after connection.

Notes on the Connectors Mounted on the MOTHER BOARD Assy

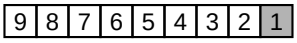


● Initial setting of the jumper switches

- The figure is a top view of a jumper switch.
- Above Pin 1 of a switch, a gray mark (shown in the figure on the right) is provided. With some switches, there will be a white mark above Pin 1 on the Motherboard.
- The position of the latch of a switch is indicated with a thick line, as shown in the figure on the right.
- The initial setting of a jumper switch is indicated by double lines, as shown in the figure on the right.

JP18 : Jumper switch for Power button, Reset, HDD LED, and Power LED

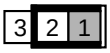
1 (–) - 2 (+)	IDE LED
3 (+) - 4 (+) 5 (–)	Power LED
6 (+) - 7 (–)	Power button
8 (–) - 9 (+)	Reset button



DKP3635 (Color of the cable: white) to Pin 1 of the jumper switch, as shown above.
If inappropriately connected, the unit will not start up.

JP14 : CMOS clear

1 - 2 : Position for normal use (factory-preset position)
2 - 3 : CMOS clear

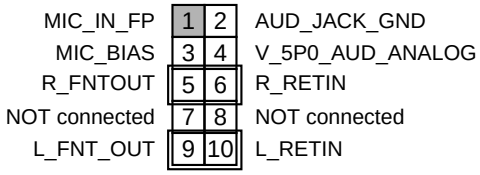


JP4 : SERIRQ for PCI Slot 3

OPEN : SERIRQ invalid (factory-preset position, SERIRQ not supported)
SHORT : SERIRQ valid

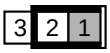
JP9 : Connector for audio and front panel

At the shipping, the jumper pins are connected to Pins 5-6 and Pins 9-10.



JP16 : Selection of the clock frequency

1 - 2 : CPU select (factory-preset position)
2 - 3 : 100MHz
EMPTY : 133MHz



J7 : CPU fan jumper switch

Connect a CPU fan whose rotation-speed monitoring is supported.

1 GND
2 +12V
3 CPU-fan-rotation-speed monitoring (by SIO)

Note: The CPU fan is installed in this unit at the factory.

No jumper pin or wire is connected to JP4, JP5, JP6, JP8, JP13, or J6.

5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10¹* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10³* →	*473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→ *R50*		*RN2H R 5 0 K*
1 Ω	→ *1R0*		*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10¹* →	*5621*	*RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	..ETC1 ASSY	DWM2159
	2	..PWRB ASSY	DWZ1106
	2	..FLKB ASSY	DWZ1118
	2	..KEYB ASSY	DWZ1108
	2	..USBB ASSY	DWZ1109
	2	..DRV1B ASSY	DWZ1110
	2	..DRV2B ASSY	DWZ1111
NSP	1	..ETC2 ASSY	DWM2161
	2	..JKIB ASSY	DWZ1120
	2	..JKOB ASSY	DWZ1121
	2	..HPVB ASSY	DWZ1115
	2	..422IB ASSY	DWZ1116
	2	..JKDB ASSY	DWZ1117
	1	..PCIB ASSY	DWP1080
	1	..DECB ASSY	DWP1081
	1	..AVIB ASSY	DWV1198
	1	..MOTHER BOARD ASSY	DXF1002(*1)

(*1)
- Replace the whole MOTHER BOARD Assy. No part in the MOTHER BOARD Assy is provided as a repair parts.
- MOTHER BOARD Assy is supplied with lithium battery.

A JKIB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC7401		BA7046F
	IC7803		LA73054
	IC7418,IC7423		MM1113XF
	IC7403		MM1114XF
	IC7404,IC7412,IC7414,IC7416,IC7422		MM1117XF
	IC7409		MM1118XF
	IC7701,IC7703,IC7704,IC7706		NJM4556AM
	IC7707-IC7710		NJM5532MD
⚠	IC7711		NJM78M05DL1A
	IC7622		PST9245
	IC7611,IC7614,IC7615,IC7618,IC7702		TC4W53FU
	IC7705,IC7802		TC4W53FU
	IC7402		TC7WH123FU
	IC7405,IC7410,IC7413,IC7415		TK15420M
	IC7419-IC7421		TK15420M
	IC7612,IC7613,IC7616,IC7617		UPC4570G2
	IC7619-IC7621		UPC4570G2
	Q7702,Q7714,Q7716		2SA1037K
	Q7409,Q7413,Q7414,Q7417,Q7420		2SA1576A
	Q7423		2SA1576A
	Q7831		2SC2412K
	Q7415,Q7418,Q7421,Q7424,Q7425		2SC4081
	Q7703-Q7712		2SD2114K
	Q7412		2SK210
	Q7426,Q7701,Q7713,Q7715		DTC114YK
	Q7613		DTC143EK
	Q7408,Q7410		HN1A01FU
	Q7416,Q7419,Q7422		HN1B01FU
	Q7407,Q7411		HN1C01FU
	Q7401,Q7402,Q7404,Q7405		RN4982
	Q7611,Q7612,Q7802-Q7804		RN4982
	D7611-D7618,D7623,D7624,D7701		1SS355
	D7401		MA111
	D7619-D7622		SML-310DT
	D7402-D7413,D7601-D7604		UDZS5.1B

COILS AND FILTERS

Mark	No.	Description	Part No.
	F7412,F7414-F7419,F7802		DTF1069
	F7831		DTF1069
	F7401-F7404		DTF1110
	L7620,L7621,L7624,L7625		VTL1157

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY7611		BSR1014

CAPACITORS

Mark	No.	Description	Part No.
	C7437,C7635,C7644,C7646,C7654		CCSRCH100D50
	C7413,C7433,C7474,C7475,C7477		CCSRCH101J50
	C7636,C7642,C7647,C7655,C7737		CCSRCH220J50
	C7741,C7748,C7753		CCSRCH220J50
	C7409,C7601,C7602		CCSRCH221J50
	C7405		CCSRCH390J50
	C7706,C7726		CCSRCH471J50
	C7707,C7723		CCSRCH750J50
	C7805,C7817		CEV101M10
	C7417,C7423,C7427,C7438		CEV101M16
	C7445,C7446,C7458,C7460,C7479		CEV101M16
	C7612,C7619,C7638,C7652		CEV101M16
	C7656-C7659,C7718,C7719,C7731		CEV101M16
	C7734,C7745		CEV101M16
	C7738,C7740,C7751,C7752		CEV220M35
	C7714		CEV470M16
	C7634,C7641,C7645,C7653		CEVNP100M25
	C7705,C7709,C7717,C7721,C7722		CEVNP470M10
	C7730		CEVNP470M10

Mark No.	Description	Part No.
	C7404	CKSRYB102K50
	C7436,C7442,C7456,C7457,C7470	CKSRYB103K50
	C7473,C7489,C7492,C7611	CKSRYB103K50
	C7403,C7406,C7408,C7411,C7412	CKSRYB104K16
	C7414,C7415,C7418,C7420,C7422	CKSRYB104K16
	C7424-C7426,C7430	CKSRYB104K16
	C7439-C7441,C7444,C7447,C7451	CKSRYB104K16
	C7455,C7459,C7461,C7463,C7464	CKSRYB104K16
	C7469,C7480,C7483,C7484,C7488	CKSRYB104K16
	C7613,C7615,C7616,C7620-C7623	CKSRYB104K16
	C7626,C7627,C7630,C7632,C7633	CKSRYB104K16
	C7637,C7639,C7643,C7648,C7649	CKSRYB104K16
	C7651,C7660,C7661,C7703,C7704	CKSRYB104K16
	C7711-C7713,C7715,C7716,C7720	CKSRYB104K16
	C7725,C7728,C7729,C7732,C7733	CKSRYB104K16
	C7735,C7736,C7742,C7744,C7747	CKSRYB104K16
	C7749,C7755,C7757,C7803,C7807	CKSRYB104K16
	C7809,C7810,C7812,C7815,C7816	CKSRYB104K16
	C7831	CKSRYB104K16
	C7401,C7416,C7434,C7435,C7448	CKSRYB105K6R3
	C7476,C7481,C7617,C7628,C7806	CKSRYB105K6R3
	C7808,C7813,C7818	CKSRYB105K6R3
	C7450,C7453,C7454,C7467,C7468	CSZSR100M16
	C7486,C7487	CSZSR100M16
RESISTORS		
	R7706,R7724	RN1/16SE1602D
	R7707,R7725	RN1/16SE3302D
	R7479	RS1/16S1001F
	R7444,R7448,R7484,R7506,R7550	RS1/16S1801F
	R7449,R7450,R7485,R7486	RS1/16S2201F
	R7507,R7508,R7551,R7552	RS1/16S2201F
	R7446,R7457,R7459,R7460,R7480	RS1/16S4700F
	R7492,R7493,R7518,R7519	RS1/16S4700F
	R7557,R7558	RS1/16S4700F
	R7451,R7487,R7509,R7553	RS1/16S5600F
	R7431,R7470,R7500,R7537	RS1/16S5601F
	R7466,R7467,R7476,R7478	RS1/16S7500F
	R7502,R7503,R7533,R7534	RS1/16S7500F
	R7419,R7420,R7434,R7524,R7525	RS1/16S75R0F
	R7530	RS1/16S75R0F
	Other Resistors	RS1/16S###J
OTHERS		
	CN7402 PH CONNECTOR	B6B-PH-SM3
	CN7613 PH CONNECTOR	B7B-PH-SM3
	JA7601 2P PIN JACK	BKB1017
	CN7801,CN7802 CONNECTOR	CKS4361
	JA7402 BNC CONNECTOR	DKN1267
	JA7403 BNC CONNECTOR	DKN1268
	JA7961 CANNON CONNECTOR	DKN1269
	CN7701 8P CONNECTOR	S8B-ZR-SM3A
	7401 PCB BINDER	VEF1040
	JA7404 DV-TERMINAL	VKB1186
	JA7401 4P MINI DIN SOCKET	VKN1072
	CN7611 20P CONNECTOR	VKN1589
	KN7401,KN7402 WRAPPING TERMINAL	VNF1084

Mark No.	Description	Part No.
B	**JKDB ASSY**	
SEMICONDUCTORS		
	IC7901	DS8922M
	IC7941	LM1881M
	IC7921	LM361M
	IC7923	NJM4558M
	D7923,D7924	1SS355
	D7925-D7927	SML-310DT
	D7901-D7908,D7921,D7922	UDZS5.1B
COILS AND FILTERS		
	F7905,F7921-F7923,F7941	DTF1069
	L7901-L7904,L7906-L7909	VTL1079
SWITCHES AND RELAYS		
	S7941	VSH1009
CAPACITORS		
	C7927,C7928	CCSRCH221J50
	C7945	CCSRCH471J50
	C7922,C7929	CEV101M16
	C7926,C7943	CEV470M16
	C7901,C7921,C7924,C7925	CKSRYB104K16
	C7941,C7942,C7944	CKSRYB104K16
RESISTORS		
	R7901,R7907,R7909	RAB4C220J
	R7943	RS1/16S75R0F
	Other Resistors	RS1/16S###J
OTHERS		
	JA7941 BNC CONNECTOR	DKN1268
	CN7901 D-SUB9 CONNECTOR	DKN1271
	CN7902 11P CONNECTOR	S11B-ZR-SM3A
	CN7941 2P CONNECTOR	S2B-ZR-SM3A
	CN7903 6P CONNECTOR	S6B-ZR-SM3A
C	**422IB ASSY**	
SEMICONDUCTORS		
	D7951-D7958	UDZS5.1B
OTHERS		
	CN7951 D-SUB9 CONNECTOR	DKN1271
	CN7952 6P CONNECTOR	S6B-ZR-SM3A
D	**HPVB ASSY**	
SEMICONDUCTORS		
	IC661	BH3544F
	Q661	RN4982
	D661	SML-310DT
COILS AND FILTERS		
	L661-L664	QTL1015
CAPACITORS		
	C670,C671	CCSRCH101J50
	C663,C668,C677	CEV101M16
	C675	CEV470M16
	C664,C676	CKSRYB104K16
	C666,C673,C674	CKSRYB105K6R3

Mark	No.	Description	Part No.
		RESISTORS	
	VR661		DCS1063
A	Other Resistors		RS1/16S###J
		OTHERS	
	JA661	HEADPHONE JACK	VKN1802
	CN661	8P CONNECTOR	S8B-ZR-SM3A

E JKOB ASSY

		SEMICONDUCTORS	
B	D7851-D7868		UDZS5.1B
		CAPACITORS	
	C7857,C7860,C7865,C7866,C7869		CCSRCH101J50
	C7851,C7852,C7873		CCSRCH221J50
	C7856		CCSRCH390J50
	C7981-C7984		CEANP471M10
	C7855,C7859,C7861,C7864,C7868		CEAT102M10
	C7872		CEV101M10
	C7853,C7854,C7858,C7862,C7863		CKSRYB104K16
	C7867,C7870		CKSRYB104K16
C		**RESISTORS**	
	R7853,R7855-R7859		RS1/16S68R0F
	R7860		RS1/16S75R0F
	Other Resistors		RS1/16S###J
		OTHERS	
	JA7851	2P PIN JACK	BKB1017
	CN7851	CONNECTOR	CKS4361
	JA7853	BNC CONNECTOR	DKN1267
	JA7854	BNC CONNECTOR	DKN1268
	JA7981	CANNON CONNECTOR	DKN1270
D	JA7855	1P PIN JACK	VKB1159
	JA7852	4P MINI DIN SOCKET	VKN1072

F DECB ASSY

		SEMICONDUCTORS	
	IC1711		ADV7172KST
	⚠ IC1101		BA033FP
	IC1411		BU2288FV
	IC1412		CY2081SL-655
	IC1211		HD6417709AF100B
E	⚠ IC1351		ICP-S2.3
	IC1512		K4S641632F-TC75
	IC1611		K4S643232F-TC60
	IC1513		M65776AFP
	IC1413		NJM2100M
	IC1751		PCM1716E
	IC1612		PD6454A8
	⚠ IC1111		PQ025EZ01ZP
	⚠ IC1121		PQ070XZ02ZP
	IC1391		PST9142N
	IC1416-IC1418,IC1851-IC1853		SN74AHC2G53HDCT
F	IC1153,IC1415,IC1511,IC1651-IC1653		TC74LCX541FT
	IC1172		TC74VHC04FT
	IC1171		TC74VHC125FT
	IC1392		TC74VHC14FT

Mark	No.	Description	Part No.
	IC1151,IC1414		TC7WU04FU
	IC1311		XC2S100-5PQ208C
	Q1811-Q1819		2SA1576A
	Q1752		2SC4081
	Q1211		2SK2033
	Q1851		DTA124EUA
	Q1411,Q1412,Q1471,Q1751,Q1852		DTC124EUA
	Q1391		UMH1N
	D1391,D1751		1SS355
	D1411		1SV323
	D1137		SML-310DT
	D1181,D1182,D1185,D1186,D1311		SML-310YT
		COILS AND FILTERS	
	F1152,F1153,F1412,F1651-F1653		DTF1069
	F1851		DTF1069
	F1751,F1755,F1756		VTF1096
	L1151		VTL1084
	L1411,L1462,L1781		VTL1157
		CAPACITORS	
	C1233		CCSRCH180J50
	C1234		CCSRCH220J50
	C1212,C1213		CCSRCH471J50
	C1415		CCSRCH560J50
	C1426		CCSRCH5R0C50
	C1102,C1111		CEV100M16
	C1462		CEV101M10
	C1121,C1414,C1417,C1711,C1717		CEV101M6R3
	C1752,C1759-C1761,C1782		CEV101M6R3
	C1393		CEV1R0M50
	C1104,C1113		CEV220M6R3
	C1123,C1216,C1333,C1335,C1516		CEV221M4
	C1523,C1615,C1622		CEV221M4
	C1101,C1115,C1154,C1171,C1424		CKSRYB103K50
	C1427,C1651-C1653		CKSRYB103K50
	C1153,C1172-C1174,C1183,C1211		CKSRYB104K16
	C1214,C1215,C1218-C1232		CKSRYB104K16
	C1311-C1332,C1337-C1342		CKSRYB104K16
	C1353-C1356,C1363-C1368		CKSRYB104K16
	C1375-C1377,C1391,C1392,C1413		CKSRYB104K16
	C1416,C1421-C1423,C1461,C1463		CKSRYB104K16
	C1512,C1513,C1518-C1522		CKSRYB104K16
	C1524-C1529,C1533-C1539		CKSRYB104K16
	C1541-C1551,C1611-C1614		CKSRYB104K16
	C1617-C1621,C1624,C1713,C1716		CKSRYB104K16
	C1718-C1725,C1751,C1753		CKSRYB104K16
	C1755-C1758,C1762,C1763,C1781		CKSRYB104K16
	C1783,C1851-C1853		CKSRYB104K16
	C1412,C1418,C1419,C1474,C1511		CKSRYB105K6R3
	C1515,C1530-C1532		CKSRYB105K6R3
	C1420		CKSRYB332K50
	C1103,C1112		CKSRYB334K10
	C1411		CKSRYB472K50
	C1754,C1764		CKSRYF105Z10
		RESISTORS	
	R711-R714,R732,R734		RAB4C103J
	R745,R746,R755,R756		RAB4C103J
	R715-R731,R733,R735-R744		RAB4C220J
	R1123		RN1/16SE1001D
	R1439		RN1/16SE1202D

Mark	No.	Description	Part No.
	R1420		RN1/16SE3000D
	R1438		RN1/16SE4701D
	R1411		RN1/16SE6800D
	R1824,R1828		RS1/16S1000F
	R1811,R1815,R1818,R1820		RS1/16S1500F
	R1719		RS1/16S1502F
	R1513		RS1/16S1801F
	R1829,R1833,R1835		RS1/16S2200F
	R1512		RS1/16S3001F
	R1520		RS1/16S3301F
	R1125		RS1/16S3900F
	R1724,R1734		RS1/16S4701F
	R1720		RS1/16S4702F
	R1723,R1732		RS1/16S6800F
	R1721		RS1/16S6801F
	R1522		RS1/8S4R7J
	Other Resistors		RS1/16S###J

OTHERS

	X1212	CRYSTAL RESONATOR	BSS1091
	CN1811	CONNECTOR	CKS4361
	CN1651	30P FLEXIBLE CONNECTOR	DKN1192
	X1151	CHIP CERALOCK 40MHz	DSS1101
	X1411	CRYSTAL RESONATOR (13.824MHz)	DSS1117
	CN1171	11P CONNECTOR	S11B-ZR-SM3A
	CN1471	2P CONNECTOR	S2B-ZR-SM3A
	CN1174	5P CONNECTOR	S5B-ZR-SM3A
	CN1172	6P CONNECTOR	S6B-ZR-SM3A
	CN1173	7P CONNECTOR	S7B-ZR-SM3A
	CN1183	7P FFC CONNECTOR	VKN1299
	KN1811,KN1812	EARTH METAL FITTING	VNF1109

G PCIB ASSY

SEMICONDUCTORS

⚠	IC2302		BA033FP
	IC2405		HD6417709AF100B
	IC2003		HY57V641620HGT-7
	IC2404		K4S643232F-TC60
	IC2406		PD6453A8
	IC2001		PE5219A
⚠	IC2305		PQ025EZ01ZP
⚠	IC2303		PQ070XZ02ZP
	IC2306		PST9142N
	IC2110		TC74LCX16245AFT
	IC2002,IC2103-IC2108,IC2308,IC2403		TC74LCX541FT
	IC2109		TC74LCX574FT
	IC2407		TC74VHC04FT
	IC2401		TC74VHC125FT
	IC2307		TC74VHC14FT
	IC2304		TC7SH08FU
	IC2102		TC7WT126FU
	IC2402		TC7WU04FU
	IC2309		XC2S100-5PQ208C
	Q2301		UMH1N
	D2303		1SS355
	D2101,D2102,D2301		SML-310DT
	D2304-D2308		SML-310YT

Mark	No.	Description	Part No.
⚠	TH2301,TH2302		MINISMDC020
⚠	TH2351		MINISMDM160

COILS AND FILTERS

	F2003-F2006,F2306-F2308		DTF1070
	F2401,F2402		DTF1070
	F2301,F2302		VTH1040
	L2101,L2403-L2409		VTL1079
	L2001,L2002		VTL1084

CAPACITORS

	C2180		CCSRCH101J50
	C2447,C2448		CCSRCH180J50
	C2412,C2413		CCSRCH471J50
	C2301,C2303,C2304,C2306,C2307		CEV100M16
	C2309,C2311,C2313,C2314		CEV100M16
	C2317-C2319,C2333,C2337,C2416		CEV100M16
	C2418		CEV100M16
	C2323		CEV1R0M50
	C2001-C2003,C2026		CEV221M4
	C2308,C2310,C2315,C2320,C2322		CKSRYB103K50
	C2324-C2332,C2336,C2338-C2348		CKSRYB103K50
	C2350,C2351,C2353-C2373		CKSRYB103K50
	C2401-C2405,C2408,C2409,C2411		CKSRYB103K50
	C2414,C2415,C2417,C2419-C2430		CKSRYB103K50
	C2432-C2446		CKSRYB103K50
	C2004-C2022,C2024,C2025		CKSRYB104K16
	C2027-C2031,C2101,C2102,C2107		CKSRYB104K16
	C2122,C2143,C2146,C2156,C2168		CKSRYB104K16
	C2190,C2194,C2321		CKSRYB104K16
	C2117		CKSRYB105K6R3
	C2305,C2312,C2316		CKSRYB224K10

RESISTORS

	R2008-R2010,R2013,R2023-R2025		RAB4C0R0J
	R2027,R2029,R2031		RAB4C0R0J
	R2002,R2014-R2020,R2050,R2051		RAB4C103J
	R2409-R2416		RAB4C103J
	R2003-R2007,R2012,R2021,R2028		RAB4C220J
	R2030,R2037,R2042,R2043		RAB4C220J
	R2064-R2068,R2070-R2073		RAB4C220J
	R2075-R2078,R2478-R2480,R2484		RAB4C220J
	R2486,R2487,R2503-R2510		RAB4C220J
	R2316		RN1/16SE1001D
	R2313		RS1/16S3900F
	Other Resistors		RS1/16S###J

OTHERS

	CN2403	11P CONNECTOR	B11B-ZR-SM3
	CN2404	5P CONNECTOR	B5B-ZR-SM3
	CN2402	6P CONNECTOR	B6B-ZR-SM3
	CN2401	7P CONNECTOR	B7B-ZR-SM3
	X2402	CRYSTAL RESONATOR	BSS1091
	X2401	CHIP CERALOCK (40MHz)	DSS1101
	CN2102	11P CONNECTOR	S11B-ZR-SM3A
	CN2101	4P CONNECTOR	S4B-ZR-SM3A
	CN2405	7P FFC CONNECTOR	VKN1299
	CN2103,CN2104	50P CONNECTOR	VKN1590
	KN2301,KN2302	(EARTH METAL FITTING)	VNF1109
	X2001	CRYSTAL RESONATOR (54.000MHz)	VSS1138

Mark	No.	Description	Part No.

H AVIB ASSY

SEMICONDUCTORS

	IC3803		BA4558F-HT
	IC6004		CS8420-CS
	IC7004		DVXCEL-BA1
⚠	IC3205		ICP-S2.3
	IC5001		M2V64S50DTP-6
	IC3501		NJM13404V
	IC3301		NJM2115M
⚠	IC3202		NJM78M05DL1A
⚠	IC3201,IC3203		NJM78M09DL1A
⚠	IC3204		NJM79M09DL1A
	IC3802		PCM1800-1
	IC3502		PD0272A1
	IC5002		PD6342A
	IC6003		PE7004A
	IC3309		PLL1700E
⚠	IC7501		PQ070XZ02ZP
	IC3302,IC3306		SN74AHC2G53HDCT
	IC3004		TC74LCX16245AFT
	IC3002,IC3003,IC3006,IC3007,IC3304		TC74LCX541FT
	IC3308,IC6501,IC6502,IC7001		TC74LCX541FT
	IC6005		TC74LCX74FT
	IC3005		TC74VHCT541AFT
	IC3310		TC74VHCU04FT
	IC3307		TC7SH04F
	IC5003		TC7SH08FU
	IC3303,IC3305		TC7SLU04F
	IC3801		TC9412AF
	IC4002		TSB41AB2PAP
	IC4001		TSB42AB4PDT
	IC3804		UPC4570G2
	IC6002		UPD61003
	IC7002,IC7003		W986432DH-7
	IC5004		XC2S50-5PQ208C
	D3501-D3504,D3801-D3804		1SS355
	D4001-D4008		1SS355
	D3301		1SV323
	D7002,D7003		EP10QY03
	D3201-D3204		SML-310DT
	D5001-D5005		SML-310YT

COILS AND FILTERS

F3301-F3305,F3307-F3310,F3803		DTF1069
F507		DTF1069
F3201-F3204,F3208-F3210,F501		DTF1070
F706,F707		DTF1070
L3501,L3502		LCYA100J2520
L3309		LCYA1R2J2520
F3205-F3207,F4002,F4003		VTF1171
F5002-F5005,F7002-F7004		VTF1171
F7006,F7007,F7501		VTF1171
L3312		VTL1078
L3305-L3308,L3313,L3314		VTL1079
L3319-L3321,L3323-L3328,L7008		VTL1079

CAPACITORS

C4026,C6037,C6042		CCSRCH102J50
C4001,C4002		CCSRCH120J50
C4025		CCSRCH221J50
C3312,C7050-C7067		CCSRCH470J50
C3810,C3811		CCSRCH471J50
C3315		CCSRCK2R0C50
C3204,C3210,C3212		CEHV470M16
C3207,C3213-C3215,C3224,C3225		CEV101M16
C3801,C3804,C3815,C3818		CEV101M16
C3309,C3310,C3320,C3509-C3511		CEV101M6R3
C3522,C3526,C3533,C4012		CEV101M6R3
C6039,C6040		CEV101M6R3
C3317,C3507,C5010,C5011		CEV221M4
C5117,C5118,C6002,C6010,C6033		CEV221M4
C7005,C7007,C7009,C7021		CEV221M4
C7024,C7025,C7503,C7505		CEV221M4
C3805-C3809,C3813,C3816,C3817		CEV330M25
C3513,C3534,C7012,C7013,C7018		CKSRYB102K50
C7020,C7041		CKSRYB102K50
C3311,C3529,C6043,C6046,C7014		CKSRYB103K50
C7016,C7019,C7040,C7043,C7504		CKSRYB103K50
C3101-C3106,C3201-C3203		CKSRYB104K16
C3205,C3206,C3208,C3209,C3211		CKSRYB104K16
C3216-C3222,C3226,C3227		CKSRYB104K16
C3301-C3308,C3314,C3316		CKSRYB104K16
C3318,C3319,C3321,C3322		CKSRYB104K16
C3502-C3506,C3508,C3512		CKSRYB104K16
C3514-C3521,C3523-C3525		CKSRYB104K16
C3527,C3528,C3530-C3532		CKSRYB104K16
C3535-C3537,C3539-C3542,C3544		CKSRYB104K16
C3547,C3549,C3550,C3802,C3803		CKSRYB104K16
C3819,C4003-C4005,C4007		CKSRYB104K16
C4009-C4011,C4013,C4015-C4017		CKSRYB104K16
C4019-C4024,C4027,C4029-C4031		CKSRYB104K16
C5002-C5009,C5012-C5023		CKSRYB104K16
C5026-C5034,C5036-C5054		CKSRYB104K16
C5089-C5116,C6001,C6003-C6009		CKSRYB104K16
C6011-C6032,C6034-C6036,C6038		CKSRYB104K16
C6041,C6501,C6502,C7001-C7004		CKSRYB104K16
C7006,C7008,C7010,C7011,C7015		CKSRYB104K16
C7017,C7022,C7023,C7026-C7039		CKSRYB104K16
C7042,C7044-C7049,C7068-C7073		CKSRYB104K16
C7501		CKSRYB104K16
C3538,C3545,C3548		CKSRYB105K6R3
C6045		CKSRYB822K50
C4014,C4018		CKSRYF105Z10
C6044		CKSRYF474Z16
VC3301 (20P)		VCM1008

RESISTORS

R3526,R3534,R3538,R3542		RAB4C0R0J
R3555-R3557,R5027,R5035		RAB4C0R0J
R4019,R4020,R4027,R4028		RAB4C102J
R3504,R3505,R3540,R3546		RAB4C103J
R3548-R3551,R4010,R4056		RAB4C103J
R4067,R4068,R6030,R6036,R6040		RAB4C103J
R6044-R6046,R7091-R7095		RAB4C103J
R4005-R4009,R4011,R4021,R4022		RAB4C220J
R4030-R4032,R4039,R4047		RAB4C220J
R4057,R4058,R4065,R4069-R4074		RAB4C220J
R5002,R5003,R5005,R5006,R5010		RAB4C220J
R5015-R5017,R5021-R5025,R5031		RAB4C220J
R5034,R5036-R5041,R5043-R5045		RAB4C220J

Mark No.	Description	Part No.
	R5047-R5054,R5056,R5057	RAB4C220J
	R5076-R5079,R5082,R5084,R5088	RAB4C220J
	R5091-R5094,R5770-R5774	RAB4C220J
	R5776-R5782,R6001-R6007	RAB4C220J
	R6022,R6023,R6028,R6029	RAB4C220J
	R6032,R6033,R6037,R6038	RAB4C220J
	R6041,R6042,R6048,R6049,R6063	RAB4C220J
	R6070-R6072,R6074,R6075	RAB4C220J
	R6525,R6526,R7003-R7006,R7044	RAB4C220J
	R7056,R7063,R7068	RAB4C220J
	R4033,R4034,R4042,R4043	RN1/16SC56R0D
	R3306,R3331,R3335,R3336,R3340	RS1/10S0R0J
	R3503,R3506,R3801,R3807	RS1/10S0R0J
	R3814,R3815,R4012,R502	RS1/10S0R0J
	R505,R506,R5101,R5102,R6008	RS1/10S0R0J
	R6013,R6014,R6076,R6077,R7017	RS1/10S0R0J
	R7096-R7098,R7501	RS1/10S0R0J
	R7054	RS1/10S100J
	R7053	RS1/10S150J
	R7507	RS1/16S1001D
	R3532	RS1/16S1001F
	R3528	RS1/16S1002F
	R3501	RS1/16S1003F
	R3529	RS1/16S1301F
	R3524	RS1/16S1802F
	R3531	RS1/16S3601F
	R7504	RS1/16S5600F
	R4023	RS1/16S6341D
	Other Resistors	RS1/16S###J

OTHERS

	CN3203,CN3204 CONNECTOR 4P	B4B-PH-SM3
	CN3301 CONNECTOR 4P	B4B-ZR-SM3
	CN3001,CN3002 CONNECTOR	CKS3930
	CN5501,CN5503,CN6002 CONNECT.	CKS4361
	CN3201 CONNECTOR 14P	S14B-PH-SM3
	CN4001 CONNECTOR 6P	S6B-PH-SM3
	CN3202 CONNECTOR 7P	S7B-PH-SM3
	CN5502 26P CONNECTOR	VKN1566
	CN3501 20P CONNECTOR	VKN1589
	KN3001-KN3007	VNF1109
	EARTH METAL FITTING	
	X3301 CRYSTAL RESONATOR (27MHz)	VSS1146
	X4001 CRYSTAL RESONATOR (24.576MHz)	VSS1151
	X7001 CRYSTAL RESONATOR (27.5MHz)	VSS1153

I PWRB ASSY

SEMICONDUCTORS

	IC401,IC451	AN8015SH
	IC301	BA9743AFV
	IC101	BP5232-25A
	IC201	BP5233-33A
⚠	IC4-IC6	ICP-N10
⚠	IC8	ICP-S2.3
	IC3	TC74HC05AF
	Q101,Q201	2SA1037K
	Q14-Q16,Q21,Q26,Q28	2SA1162
	Q5,Q9	2SA1162
	Q301,Q302,Q401,Q402,Q451	2SA1900
	Q18-Q20	2SD2114K
	Q24	DTA124EUA
	Q1,Q11-Q13,Q2	DTC124EUA
	Q22,Q23,Q25,Q29	DTC124EUA
	Q3,Q4,Q6-Q8	DTC124EUA
	Q10,Q17,Q27,Q30	UMH1N
	D1,D14-D18,D2	1SS355
	D20,D21,D23,D3-D8	1SS355
	D302,D402,D403,D452,D453	RB400D
	D10-D13,D19,D9	SML-310DT
	D24,D25	SML-310YT

COILS AND FILTERS

	L301,L401	DTH1191
	L451	DTH1192
	L303	VTL1157

SWITCHES AND RELAYS

	RY1,RY2	BSR1014

CAPACITORS

	C309,C407,C455	CCSRCH221J50
	C101,C201,C90	CEAT102M16
	C305,C306	CEAT470M35
	C103,C203	CEAT471M10
	C33,C35,C37	CEAT471M35
	C308,C403,C453	CEV100M35
	C10,C12,C2,C4	CEV100M50
	C457,C458,C6,C8	CEV100M50
	C312-C314	CEV101M10
	C405	CEV101M16
	C410	CEV330M35
	C21-C23	CEVW100M35
	C401,C451	CKSRYB102K50
	C1,C11,C13-C16	CKSRYB103K50
	C18-C20,C24,C29,C3	CKSRYB103K50
	C32,C34,C36,C38-C45	CKSRYB103K50
	C5,C7,C9	CKSRYB103K50
	C315	CKSRYB104K16
	C102,C202,C307,C310,C402	CKSRYF104Z25
	C452	CKSRYF104Z25
	C301,C304,C408,C456	CKSRYF105Z10
	C311,C404,C454	CSZS100M10

RESISTORS

	R409,R459	RN1/16SE1203D
	R312,R318	RN1/16SE1502D
	R112	RN1/16SE2402D
	R212,R421	RN1/16SE2702D
	R307	RN1/16SE3302D
	R401,R453	RN1/16SE3601D
	R311	RN1/16SE3902D
	R464	RN1/16SE4702D
	R319	RN1/16SE5102D
	R306	RN1/16SE6202D
	R403,R451	RN1/16SE8201D
	R404,R455	RN1/16SE9101D
	R101,R108,R201,R208	RS1/10S0R0J
	R302,R303,R317,R408,R411	RS1/10S0R0J
	R420,R452,R469,R85-R87	RS1/10S0R0J

Mark No.	Description	Part No.
	R69,R70,R73,R74	RS1/10S270J
	R77,R78	RS1/10S270J
	R405,R456	RS1/10S680J
	R308,R309	RS1/10S752J
	VR201 (1k)	VCP1125
	VR101 (2.2k)	VCP1127
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3 PLUG 20-P	AKM1149
	CN2 KR CONNECTOR 14P	B14B-PH-K
	CN5 3P PH CONNECTOR	B3B-PH-SM3
	CN6 6P CONNECTOR	B6B-ZR-SM3
	CN1,CN4 FOR ATX PSU CONNECTOR	DKN1272
	CN10,CN11,CN9 PLUG(2P)	KM200SA2
	KN1-KN3 WRAPPING TERMINAL	VNF1084

J FLKB ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	IC501	PE5392A9
	IC504	PST9142N
	IC502,IC503	PT6315
	IC505	RPM7140-H4
	Q511	2SA1162
	Q509	2SB1260
	Q504,Q505	DTA124EUA
	Q501,Q502,Q506-Q508	DTA143EUA
	Q510	DTC124EUA
	D501,D504,D511-D520	1SS355
	D508-D510	SLR-343MC
	D506	SPR-39MVWF(MN)
	D502,D503,D505	UDZS6.2B
	COILS AND FILTERS	
	L501	QTL1015
	F501	VTH1009
	SWITCHES AND RELAYS	
	S501-S507,S509	ASG7013
	CAPACITORS	
	C503,C511	CEV101M6R3
	C521-C523	CEVW101M16
	C510,C513,C517-C520	CKSRYB103K50
	C501,C502,C504-C509,C512	CKSRYF104Z25
	C514-C516	CKSRYF104Z25
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	CN502 CONNECTOR 6P	52492-0620
	CN503 CONNECTOR 25P	52492-2520
	CN504 CONNECTOR 3P	53025-0310
	CN501 PLUG 20P	BKM1070
	V501,V502 FL TUBE	DAW1019
	0 LED SPACER	DEC2592
	CN505 8P CONNECTOR	S9B-ZR-SM3A
	X501 CHIP CERAMIC RESONATOR	VSS1102

K KEYB ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	Q602,Q605,Q609,Q612	DTA124EUA
	D603,D606,D608,D611	NSPW315BS-0359
	D613	UDZS6.2B
	SWITCHES AND RELAYS	
	S601-S610	ASG7013
	CAPACITORS	
	C601,C602	CKSRYF104Z25
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	CN602 CONNECTOR 6P	52492-0620
	CN601 CONNECTOR 25P	52492-2520
	CN603 CONNECTOR 5P	S5B-ZR-SM3A

L DRV1B ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	Q631-Q633	DTA143EUA
	D631	SLR-343DC
	D632	SPR-39MVWF(MN)
	SWITCHES AND RELAYS	
	S631	ASG7013
	CAPACITORS	
	C631	CKSRYF104Z25
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	CN631 CONNECTOR 6P	52492-0620
	0 LED SPACER	DEC2592

M DRV2B ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	Q641-Q643	DTA143EUA
	D641	SLR-343DC
	D642	SPR-39MVWF(MN)
	SWITCHES AND RELAYS	
	S641	ASG7013
	CAPACITORS	
	C641	CKSRYF104Z25
	RESISTORS	
	Other Resistors	RS1/16S###J
	OTHERS	
	CN641 CONNECTOR 6P	52492-0620
	0 LED SPACER	DEC2592

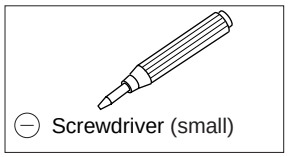
N USBB ASSY

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	D681	SML-310DT

Mark No.	Description	Part No.
CAPACITORS		
C681		CEAT471M10
C681		CKSRYF104Z25
RESISTORS		
R706,R707		RS1/10S0R0J
Other Resistors		RS1/16S###J
OTHERS		
CN684	3P PH CONNECTOR	B3B-PH-SM3
JA681	USB CONNECTOR	DKN1273
CN681	RF HEADER	DKN1274
KN682	WRAPPING TERMINAL	VNF1084

6. ADJUSTMENT
6.1 27MHz CLOCK ADJUSTMENT

■ Jigs and Measuring Instruments

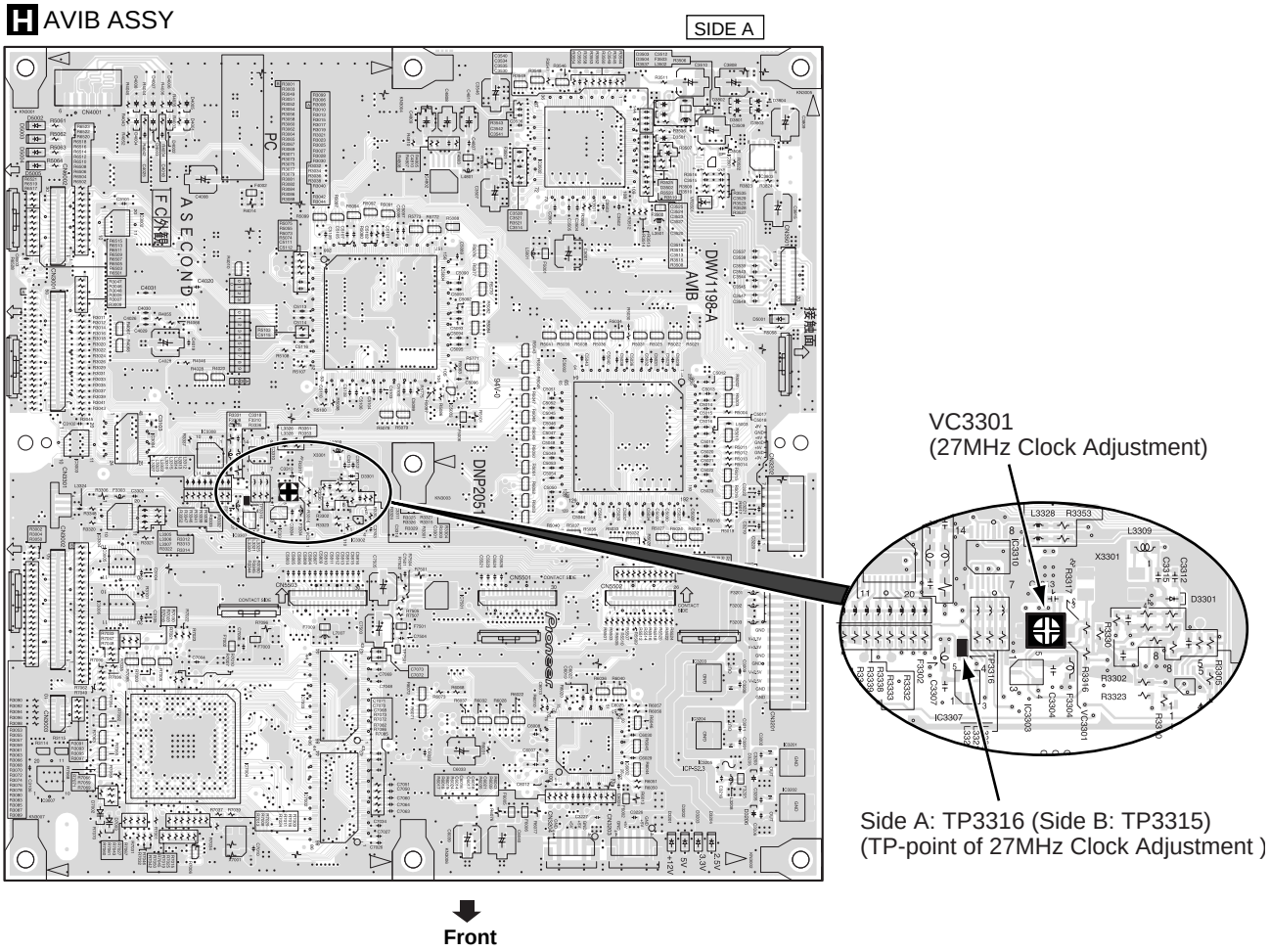


■ Necessary Adjustment Points

When	Adjustment Points
Exchange the AVIB Assy	VC3301 (27MHz Clock Adjustment)

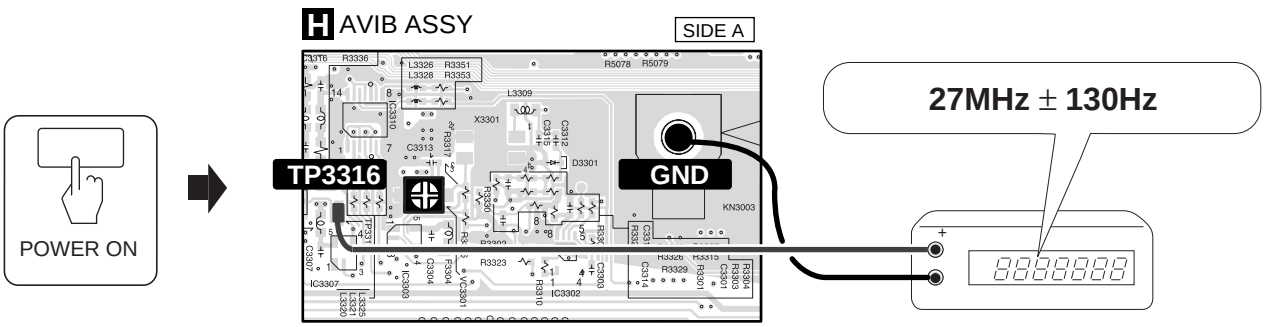
■ Adjustment and Adjustment Points

H AVIB ASSY



■ How to Adjust

Adjustment conditions: While adjusting, there must be no video input connected.



7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TESTMODE

1) How to enter Test mode

Using the GGF1067 remote control unit for service, press the [ESC] key then the [TEST] key to enter Test mode.
To quit Test mode, press the [ESC] key.

2) Description of various Test modes

2-1) FAN Test mode ([CX] - [0] to [7], [9])

After entering Test mode, press the [CX] key to enter FAN Test mode, then press a numeric key corresponding to a fan (fans) to be tested. The fans that can be tested are two fans in the front section and one fan in the rear section (a fan not used for the power-supply block).

[0]: All fans ON
[1]: All fans OFF
[2]: Left fan in the front section ON (the other fans retain their previous statuses.)
[3]: Left fan in the front section OFF (the other fans retain their previous statuses.)
[4]: Right fan in the front section ON (the other fans retain their previous statuses.)
[5]: Right fan in the front section OFF (the other fans retain their previous statuses.)
[6]: The fan in the rear section ON (the other fans retain their previous statuses.)
[7]: The fan at the rear section OFF (the other fans retain their previous statuses.)
[9]: Terminating FAN Test mode

2-2) LED/FL Test mode ([P.RUN] - [0] , [1] , [2])

After entering Test mode, press the [P.RUN] key to enter LED/FL Test mode:

[0]: Terminating LED/FL Test mode
[1]: Lighting all LEDs and FLs
[2]: Distinguishing all LEDs and FLs

2-3) Front-Panel-Button-Input Test mode ([TV/LDP])

After entering Test mode, press the [TV/LDP] key to enter Front-Panel-Button-Input Test mode then press all the buttons on the front panel one by one. The segments on the FL display are also extinguished one by one. When all buttons on the front panel are pressed, all segments except for the three on the right (two in a case of the 2-drive unit) are extinguished. When pressing the [STANDBY/ON] button, do NOT hold it pressed. Otherwise, the unit will be turned off. When pressed, some buttons may activate their corresponding operations.

[0]: Terminating Front-Panel-Button-Input Test mode

2-4) System-Information-Display Test mode ([REP.A] - [0] , [1] to [9])

After entering Test mode, press the [REP.A] key to display data on the hardware.

[0]: Terminating System-Information-Display Test mode

[1]: Main

CPU : The data (operation clock) on the mounted CPU can be checked.

Memory : The capacity of installed memory can be checked.

User Data : The total vacant capacity in the User Data area on the HDD can be checked. This vacant capacity is different from that displayed in normal operation.

PCI : Whether the Encoder board or Decoder board can be recognized by Linux or not can be checked. Being recognized does not mean that the boards are operable, but if not recognized, the boards may have some trouble.

[2]: USB (The connected USB devices will be displayed.)

IMPORTANT: During the USB Test, if a connected USB device, such as a mouse, is operated, the unit may hang up. Do NOT operate a connected USB device during the USB Test.

[3]: Network

IP Address/Netmask/MAC Address

If Network is set to ON on the Function menu, the IP address can be confirmed. If it is not set to ON, "!!!!!NO ID ADDRESS!!!!!" is displayed.

10 base/100 base

The connection conditions of the network (Ethernet) can be confirmed:
No Link: No connection to the network
10base T: The 10BaseT standard is used. (This indication is also displayed when the hub used does not support 100Base.)
100base Tx-FD: The 100Base standard is used.

[4]: HDD (IDE Primary-Master)

Data on the HDD. The SMART data are also confirmed.

[5]: HDD (IDE Primary-Slave)

Normally, no data are displayed.

[6]: DVD-R/RW Drive 1

The data on Drive 1 are displayed.

[7]: DVD-R/RW Drive 2

The data on Drive 2 are displayed if it is connected.

[8]: DVD-R/RW Drive 1 error log

The error log for Drive 1 is displayed.

[9]: DVD-R/RW Drive 2 error log

The error log for Drive 2 is displayed if it is connected.

2-5) Loopback Test mode ([REP.B] - [0] , [1] to [4])

After entering Test mode, press the [REP.B] key to enter Loopback Test mode for the RS-422A and RS-232C ports:

[0]: Terminating Loopback Test mode

[1]: Starting the RS-422A Loopback Test

[2]: Starting the RS-232C Loopback Test

[3]: Starting the RS-422A Loopback Test (but stopping when an error is generated)

[4]: Starting the RS-232C Loopback Test (but stopping when an error is generated)

2-6) Clearing data on cumulative power-on time, etc. ([A.MON] - [0] , [1] , [8] , [9])

After entering Test mode, press the [A.MON] key to enter Test mode for clearing data on cumulative power-on time, etc.:

[0]: Clearing cumulative time for accessing to the HDD
[1]: Clearing cumulative power-on time of the product
[8]: Copying the Setup file (obtainable via FTP)
[9]: Copying the Log file (obtainable via FTP)

2-7) Error-Rate-Measurement Test mode ([PLAY])

After entering Test mode, insert a disc and press the [PLAY] key to enter Error-Rate-Measurement Test mode for Drive 1.
For measurement for Drive 2, press the [2] key. Measurement starts from address 0. To change the address for measurement, use [SCAN F] or [SCAN R].

[SCAN F]: Advancing the address for measurement by 0x10000
[SCAN R]: Setting the address for measurement back by 0x10000
[1]: Starting measurement for Drive 1
[2]: Starting measurement for Drive 2
[OP/ST]: Terminating measurement

2-8) Test mode with result (OK/NG) displayed ([0] , [1] to [7])

After entering Test mode, press one of the numeric keys. The corresponding test will be performed and the result (OK/NG) is displayed.
To proceed to the next test and clear the OK/NG result, press the [CLEAR] key.

[0]: Consecutive testing of [1] - [4] below (Testing stops when the test result becomes NG.)
[1]: RS-422A Loopback Test
Perform this test after connecting the IN and OUT RS-422A ports with a cable.
[1]: RS-232C Loopback Test
Perform this test after connecting the jig for loopback testing to the RS-232C port.
[3]: LAN Test
Perform this test after connecting the unit to the valid network with a LAN cable.
[4]: USB Test
Perform this test after connecting keyboards or mice to all the USB ports on the front and rear panels.
[5]: Error Rate Test (Drive 1)
Perform this test after loading a disc into Drive 1.
[6]: Error Rate Test (Drive 2)
Perform this test after loading a disc into Drive 2.
[7]: LTC display
The LTC being input is displayed on the FL display. In this mode, OK/NG judgment is not performed.
[CLEAR]: (When entered after one of the above test) To clear the result display

Note: About error-rate measurement, see the note on it in "7.1.2 List of Codes in Test Mode."

7.1.2 TEST MODE CODE

With the aid of the GGF1067 remote control unit for service, Test mode is operated.

No.	Code Input			Operation/Usage	Remarks
1	[ESC]+[TEST]			TEST MODE	
2		[CX]		FAN TEST MODE	
3			[0]	All fans ON	
4			[1]	All fans OFF	
5			[2]	Left FAN ON	
6			[3]	Left FAN OFF	
7			[4]	Right FAN ON	
8			[5]	Right FAN OFF	
9			[6]	Rear FAN ON	
10			[7]	Rear FAN OFF	
11			[9]	Terminating	
12		[P.RUN]		LED/FL TEST	
13			[0]	All LEDs/FLs lit	
14			[1]	All LEDs/FLs extinguished	
15			[2]	Terminating	
16		[TV/LDP]		Starting Front-Panel-Button-Input Test mode	Each time a button on the front panel is pressed, one segment on the FL display is extinguished.
17			[0]	Terminating	
18		[STEREO]+[8]		Drive 1 Region display	
19		[STEREO]+[9]		Drive 2 Region display	Effective when an optional drive is mounted
20		[REP.A]		System information display	
21			[0]	Terminating	
22			[1]	Main system information display	Built-in CPU (operation clock), capacity of the installed memory devices, vacant HDD capacity for User Data, recognition of PCI Boards (Encoder/Decoder)
23			[2]	USB-related data display	Data on the connected devices
24			[3]	Network-related data display	When Network is set to ON: Confirmation of IP address/Netmask/MAC address display, connection conditions (No Link/10BaseT/100Base Tx-FD)
25			[4]	Primary Master Drive data display	HDD SMART data display
26			[5]	Primary Slave Drive data display	Normally, no drive connected
27			[6]	Secondary Master Drive data display	
28			[7]	Secondary Slave Drive data display	Effective when an optional drive is mounted
29			[8]	Drive 1 error log	
30			[9]	Drive 2 error log	Effective when an optional drive is mounted
31		[REP.B]		Loopback TEST	
32			[0]	Terminating	
33			[1]	RS-422A Loopback TEST	
34			[2]	RS-232C Loopback TEST	
35			[3]	RS-422A Loopback TEST (Error Stop)	
36			[4]	RS-232C Loopback TEST (Error Stop)	
37		[A.MON]		Power On Time Clear	
38			[0]	HDD Access Time	
39			[1]	Power On Time	
40			[8]	Copying the Setup file	Obtainable via FTP
41			[9]	Copying the Log file	Obtainable via FTP
42		[PLAY]		Error Rate TEST	
43			[SCAN F]	+0x10000	
44			[SCAN R]	-0x10000	
45			[1]	Starting measurement for Drive 1	
46			[2]	Starting measurement for Drive 2	
47			[OP/ST]	Terminating measurement	
48		[0]		External I/F TEST (NG STOP)	Consecutive testing from 1 to 4
49		[1]		RS-422A Loopback TEST	REMOTE IN-OUT connection
50		[2]		RS-232C Loopback TEST	TXD-RXD connection
51		[3]		LAN TEST	DHCP setting, obtaining an IP address

No.	Code Input	Operation/Usage	Remarks
52	[4]	USB TEST	USB devices must be connected to four ports. Do not operate the connected USB devices during the USB test. For example, if the connected mouse is operated during the USB test, the unit may hang up.
53	[5]	Error Rate TEST (Drive 1)	The error rate is measured at 0x30000 three times, and the average value is judged. The command must be input during playback stop. ROM: Th value 3.3x10E-3 R, RW: Th value 3.3x10E-3
54	[6]	Error Rate TEST (Drive 2)	Effective when an optional drive is mounted
55	[7]	LTC display	Input TC is displayed on the FL display
56	[CLEAR]	Terminating result display	
57	[ESC]	Canceling Test mode	
58	[ESC+[PAUSE]	Shortcut command	
59	[1]	V IN- Composite	
60	[2]	V IN-S	
61	[3]	V IN-Component (Beta)	
62	[4]	V IN-Component (SMPTE)	
63	[5]	V IN-DV	
64	[6]	V IN-SDI	Effective when an optional board is mounted
65	[7]	A IN-RCA	
66	[8]	A IN-XLR	
67	[9]	A IN-DV	
68	[0]	A IN-SDI	Effective when an optional board is mounted
69	[+10]	A IN-AES/EBU	Effective when an optional board is mounted
70	[TEST]	Target DRV - HDD	
71	[CX]	Target DRV - DVD 1	
72	[REP.A]	Target DRV - DVD 2	Effective when an optional board is mounted
73	[REP.B]	Target DRV - DVD 1 & 2	Effective when an optional board is mounted
74	[STEREO]	External Sync. OFF	Effective only during playback or recording stop
75	[P.RUN]	External Sync. NTSC	Effective only during playback or recording stop
76	[A.MON]	External Sync. PAL	Effective only during playback or recording stop
77	[SPEED-]	Progressive OFF	Effective only during playback or recording stop
78	[SPEED+]	Progressive ON	Effective only during playback or recording stop
79	[SIDE.A]	TC PORT - LTC	
80	[SIDE.B]	TC PORT - RS-422A	
81	[TV/LDP]	TC PORT - DV	
82	[SCAN.F]	DV OUT ON	
83	[SCAN.R]	DV OUT OFF	
84	[x3 FWD]	REC	
85	[x3 REV]	REC STOP	
86	[STEP F]	Initialize	
87	[STEP R]	Finalize	
88	[ESC]+[OPEN/STOP]	Open/Close	
89	[ESC+[DISP]	Display of data for debugging-Page 1: System data	
90	[DISP]	To next page	Page 1: DVD-playback-related data, FAN/PS-ON operation data, destination/region data (DECB/DRV1/DRV2), GUID data
			Page 2: DVD-playback-related data
			Page 3: Decoding-related data (DECB)
			Page 4: Encoding-related data (PCIB/AVIB)
			Page 5: Encoding-related data (APL)
			Page 6: Linux-related data

- How the [ESC] code is processed
  - When the [ESC] code is received, ESCAPE mode is entered, but in combination with the code(s) that follow(s), a specific meaning is added.
  - ESCAPE mode is canceled if another code is received after the [ESC] code.
  - If [ESC] codes are received continuously, ESCAPE mode is retained.
- For playback-related operations, use the remote control unit supplied with the main unit.
- The factory preset mode of the unit at power-on is Standby. To start up the unit, press the [STOP] button, then press the [STANDBY/ON] button while in Standby mode.
- If the error rate being measured is distinctly degraded because of scratches on the media or defective media, a command cannot be sent from the drive, and proper error-rate-measurement may not be performed. If an error rate is not displayed, or OK/NG is not displayed on the monitor, restart the PRV-LX1 (by resetting the drive) and perform the error-rate-measurement again.

7.1.3 LED Specifications

LED specifications

Assy	ST LED	Function		Operation while the LED is lit/remarks	Checker Chip	Monitor Point
PWRB Assy (DWZ1106)	D9	HDD_IND	HDD access indicator	In the process of accessing the HDD	–	
	D10	V+5VSB	Confirming STB +5 V power supply	Outputting +5 VSB from ATX power supply		
	D11	V+5V	Confirming +5 V power supply	Outputting +5 V from ATX power supply		
	D12	V+3.3VD	Confirming +3.3 V power supply	Outputting +3.3 V from IC201		
	D13	V+2.5VD	Confirming +2.5 V power supply	Outputting +2.5 V from IC101		
	D19	V+5VSB_M	Confirming STB +5 V power supply for MB	Outputting +5 VSB from RY1		
	D24	FAN DET	Confirming fan operation	STB or normal operation (rotation) of fans A fan being stopped by the fan control signal is not detected. Without an optional drive: Monitoring the rear fan and the fan for Drive 1 With an optional drive: Monitoring the rear fan and the fans for Drives 1 and 2		
	D25	PS_ON	Confirming PS_ON signal from the MB output	STB, or MB output set to H When D25 is lit, D11/12/13 are not lit (ATX power output disabled) Sequences: 1. When the Power switch on the rear panel is turned ON, D10, D24, and D25 light. 2. When the STANDBY/ON button on the front panel is set to ON, D19 lights, D25 is extinguished, D11, D12, and D13 light, then USBB D681 lights.		
FLKB Assy (DWZ1118)	–				–	
KEYB Assy (DWZ1108)	–				–	
USBB Assy (DWZ1109)	D681	USB_PWR	Confirming the power supply to USBB	Outputting +5 V from PWRB RY2, supplying USB_PWR to USB terminals on the front panel	–	
DRV1B Assy (DWZ1110)	–				–	
DRV2B Assy (DWZ1111)	–				–	
JKIB Assy (DWZ1120)	D7619	V+9V	Confirming +9 V supply for video	Outputting +9 V from AVIB IC3201	–	
	D7620	V+9A	Confirming +9 V supply for audio	Outputting +9 V from AVIB IC3203		
	D7621	V-9A	Confirming -9 V supply for audio	Outputting -9 V from AVIB IC3204		
	D7622	V+5A	Confirming +5 V supply for video	Outputting +5 V from AVIB IC3202		
JKOB Assy (DWZ1121)	–				–	
HPVB Assy (DWZ1115)	D661	V+5HP	Confirming +5 V supply	Outputting +5 V from JKIB IC7711	–	
422IBAssy (DWZ1116)	–				–	
JKDB Assy (DWZ1117)	D7925	V+12_LTC	Confirming +12 V supply for LTC	Outputting +12 V from MB via PCIB	–	
	D7926	V-12_LTC	Confirming -12 V supply for LTC	Outputting -12 V from MB via PCIB		
	D7927	V+5D	Confirming +5 V supply	Outputting +5 V from MB via PCIB		

Assy	ST LED	Function		Operation while the LED is lit/remarks
PCIB Assy (DWP1080)	D2101	V-12V	Confirming PCI-12 V supply	Outputting -12 V from MB
	D2102	V+12V	Confirming PCI+12 V supply	Outputting +12 V from MB
	D2301	V+5M	Confirming PCI+5 V supply	Outputting +5 V from MB, normal operation of TH2351 (Poly switch)
	D2304	FPGA_ACTIVE	Confirming Xilinx operational status	Default: lit (Config. completed), during Master transmission: flashing
	D2305	PTD [0]	Confirming encoder operational status (0)	Error display on startup
	D2306	PTD [1]	Confirming encoder operational status (1)	
	D2307	PTD [2]	Confirming encoder operational status (2)	
	D2308	PTD [3]	Confirming encoder operational status (3)	
DECB Assy (DWP1081)	D1137	V+SH3	Confirming +1.8V-supply for SH3	Outputting +1.8 V from IC1121
	D1181	PTD [0]		During normal operation:
	D1182	PTD [1]		
	D1185	PTD [2]		
	D1186	PTD [3]		Error Status:
	D1311	FPGA ACTIVE	Confirming DECB operational status / Confirming Xlinx operational status	Default: Lit (Config. completed), during transmission of SH3-AV1 data: flashing, then extinguished when Xilinx is written to the FIFO stack, and lit when the stack is empty (FIFO EMPTY).

Device check	[3] [2] [1] [0]
No error	0000
PCIB Xilinx (IC2309)	0001
AVIB Xilinx (IC5004)	0010
reserved	0011
SDRAM (IC2404)	0100
Slalom (IC2001)	0101
Slalom SDRAM (IC2003)	0110
George (IC3502)	0111
Vaikilt (IC5002)	1000
Aprilia (IC6003)	1001
Celynx (IC4001)	1010

Notes:
- When encoding starts after the device check, the LED display changes to the encode debugging display.
- If errors are generated simultaneously for several devices, the error of the highest-priority device is displayed.

During playback	Randomly lit
During stop	All LEDs extinguished

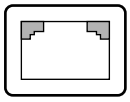
Failure in writing to flash	All LEDs lit
Xilinx configuration error	All LEDs flashing (at intervals of 1 sec)
SH SDRAM error	D1181 lights.
Video encoder Initialize error	D1182 lights.
AV1 initialize error	D1185 lights.
AV1 SDRAM error	D1186 lights.

Checker Chip	Monitor Point
TP2034	54MHz clock
TP2111	-12 V power supply
TP2112	+12 V power supply
TP2113	27MHz clock
TP2304	GND
TP2305	GND
TP2306	+2.5 V power supply
TP2307	+5 V power supply
TP2308	+5 V power supply (after passing TH point at the Poly switch)
TP2401	+3.3 V power supply
TP2402	+1.8 V power supply
TP2403	32.768kHz clock
TP2404	40-MHz clock
TP1101	GND
TP1102	GND
TP1103	GND
TP1104	GND
TP1111	GND
TP1112	GND
TP1113	GND
TP1114	GND
TP1152	40MHz
TP1211	1.8V
TP1212	3.3V
TP1311	2.5V
TP1312	3.3V
TP1413	27MHz
TP1414	16.9344MHz
TP1511	3.3V
TP1512	1.8V
TP1781	GND
TP1782	GND
TP1785	12V
TP1787	5V
TP1953	5V
TP1954	5V
TP1957	3.3V
TP1958	3.3V
TP1961	2.5V
TP1962	2.5V
TP1965	1.8V
TP1966	1.8V
TP1969	1.8V
TP1970	1.8V

Assy	ST LED	Function		Operation while the LED is lit/remarks
AVIB Assy (DWV1198)	D3201	V+12I	Confirming +12 V supply	Outputting +12 V from PWRB
	D3202	V+5DI	Confirming +5 V supply	Outputting +5 V from PWRB, normal operation of IC3205 (ICP-S2.3)
	D3203	V+3_3I	Confirming +3.3 V supply	Outputting +3.3 V from PWRB
	D3204	V+2_5I	Confirming +2.5 V supply	Outputting +2.5 V from PWRB
	D5001	ENC OK	Confirming Xlinx operational status	Default: lit (Config. completed), during ENC operation: flashing
	D5002	WMKD7	Confirming encoder operational status (3)	Error indications at startup are the same as for PCIB D2305-D2308.
	D5003	WMKD6	Confirming encoder operational status (2)	
	D5004	WMKD5	Confirming encoder operational status (1)	
	D5005	WMKD4	Confirming encoder operational status (0)	

Checker Chip	Monitor Point
–	

Announcement functions of the LED and buzzer

Item	Function		Description	Remarks
Buzzer				
1	Protection of the HD boot sector		Protection of the HD boot sector (security function against computer viruses)	The warning message is displayed, with repeated peep sound.
2	Video error		This code indicates that a video error was generated. The BIOS cannot initialize the video screen for displaying additional data.	Following two peeps, a single beep sounds.
3	DRAM error		This code indicates that a DRAM error was generated.	Repeated beeps sound.
LED				
1	Power LED	S0 mode	LED ON	
		S1 mode	The LED flashes at a 1-Hz rate.	The LED flashes once per second.
		S3 mode	The LED flashes at a 1-Hz rate.	The LED flashes once per second.
		S4 mode	LED off	
		S5 mode	LED off	
2	HDD LED		The LED flashes.	The LED flashes while the data are being accessed (read/write).
3	RJ45 LED	100M	Green LED ON	 1 2 3 6
		10M	Green LED OFF	
		Link	Yellow LED flashes	
		Active	Yellow LED ON	

No.	Signal
1	TD+
2	TD-
3	RX+
6	RX-

7.1.4 POWER-ON Sequence

Operation *1	FL Display (left)	FL Display (right)	Video Output	VGA Output
Power on	POWER	--ON--	–	–
Starting BIOS	PLEASE	WAIT	Start of opening logo display	BIOS startup screen
Searching for the drive to be started *2				
(Starting from HDD)				
Running boot loader				
Starting kernel				Start of opening logo display
Starting execution of startup script, successful communication with Front-panel-microcomputer	POWER-ON	=		
Starting checking Root file system *3	POWER-ON	==		
Completion of checking root file system	POWER-ON	===		
Completion of remounting root file system	POWER-ON	====		
Checking other file systems *4	POWER-ON	FSCK		
	POWER-ON	FSCK-HOME		
	POWER-ON	FSCK-VAR		
	POWER-ON	FSCK-RECVER		
	POWER-ON	FSCK-DATA		
Completion of mounting file systems	POWER-ON	=====		
Completion of sorting out file systems	POWER-ON	======		
Completing all the following initialization processes for the Recorder: • Initialization for each destination • Checking the region code • Updating "poweron.log" • Checking the PCI board *5 • Checking the firmware version *6 • Disposal of unnecessary files	POWER-ON	=======		
Starting initialization of the network *7	POWER-ON	========		
Completing initialization of the network	POWER-ON	=========		
Initializing the system log	POWER-ON	==========		
Completing initialization processes	POWER-ON	===========	End of opening logo display	End of opening logo display
Starting the application *8	00 : 00 : 00 : 00	00 : 00 : 00 : 00	Black or blue screen	Screen with an X-shape mouse pointer
Completing startup of application			Throughout, or black or blue screen	PRV-LX1 logo display

*1: The displays indicated in the FL-display, video-output, or VGA-output columns are to be displayed at the point when each corresponding operation finishes.

*2: In the BIOS, the HDD is programmed to be the first drive to be started. If the HDD cannot be recognized as a startup drive because of a defect, etc., the following message is displayed on the VGA output:

DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER

In this case, check the connections at the HDD connector block. If there is any loose connection, turn off the power and clear the CMOS data (by changing the position of JP14). If this does not improve the situation, reinstall the OS.
If OS reinstallation is impossible, replace the HDD then install the OS.

*3: If an error is detected during root-file-system check, automatic restoration is performed. In this case, the indications on the FL displays change as follows:

Operation	FL Display (left)	FL Display (right)
Error detection	POWER-ON	ROOT-ERROR
Executing reboot for restoration	POWER-ON	ROOT-ERROR
Rebooting starts	START	RECVER=
In the process of restoration	START	RECVER== ~ RECVER====
Completing restoration	START	RECVER=====
Restarting booting	START	RECVER=====

If automatic restoration is repeatedly executed, reinstall the OS.
After automatic restoration is executed, the following sentence is added to the log file:

!!!!!! The root file system has been recovered !!!!!!!!

*4: If an unrecoverable error exists in another file system, one or more messages, as indicated below, will be displayed on the FL displays.

FL Display (left)	FL Display (right)
FSCK-ERROR	BOOT/USR
FSCK-ERROR	HOME
FSCK-ERROR	VAR
POWER-ON	FSCK-ERROR

Although the system can be started up even after the above messages are displayed, reinstall the OS anyway, because the system may be unstable. (In this case, an installation leaving the user data intact will suffice.)

*5: If the Encoder or Decoder board cannot be detected at startup, restarting is automatically executed. If the board cannot be detected for a second time, the application program will not be started. One of the following will be displayed on the FL displays:

Operation	FL Display (left)	FL Display (right)
In a case when the Encoder board could not be detected	-NO-BOARD-	ENCODER
In a case when the Decoder board could not be detected	-NO-BOARD-	DECODER

In this case, the following sentences are added to the log files:

Error displays for the Encoder board:
First error display : **!!!!!!!!!! NO ENCODER BOARD ERROR (REBOOT) !!!!!!!!!!**
Second error display : **!!!!!!!!!! NO ENCODER BOARD ERROR AGAIN !!!!!!!!!!**
(If this is displayed, the unit was not started)

Error displays for the Decoder board:
First error display : **!!!!!!!!!! NO DECODER BOARD ERROR (REBOOT) !!!!!!!!!!**
Second error display : **!!!!!!!!!! NO DECODER BOARD ERROR AGAIN !!!!!!!!!!**
(If this is displayed, the unit was not started)

*6: Whether or not the firmware versions for the Encoder board, Decoder board, and drive are identical to those of the application software is checked. If not identical, the application will not start up. Inconsistency of versions may result in most cases after replacing the above parts for repair. In such a case, install the latest firmware program.

*7: Initialization of the network is not executed if Network is not set to Enabled on the Function menu. If the network cable is not connected, initialization of the network is not executed even if Network is set to Enabled. If the DHCP server does not exist even if DHCP is assigned in the network setting, the startup time will be delayed more than 30 seconds.

*8: Normally, the application starts up. However, in the following cases, the application does not start up:

① When the Encoder or Decoder board could not be detected
In this case, "-NO-BOARD-DECODER" or "-NO-BOARD-ENCODER" is displayed on the FL display, and only the STANDBY/ON button will be active.

② When the firmware version for the Encoder board, Decoder board, or drive is not identical to that in the application software
In this case, "ERROR FIRM-VERSION" is displayed on the FL displays, and only the [STANDBY/ON] button will be active. This may result after replacing the PCI board with one having the old firmware when repairing. In this case, press the [STANDBY/ON] button while holding the [ENTER] button on the front panel pressed, and install the latest firmware program.

③ When the [STANDBY/ON] button is pressed while the [ENTER] button on the front panel is held pressed, Program-Install mode is activated. In this case, "PGM-INSTALL" is displayed on the FL displays.

④ If the region set for the drive is different from the destination setting for the unit, Region-Resetting mode is activated. In this case, "CHANGE-RGN" is displayed on the FL displays.

7.1.5 How to Check the Error Log

The PRV-LX1 is provided with a log file in which the data at the point when the power is turned on are stored. In the log file, the number of times the power is turned on, time when the power is turned on and off, and error data can be checked.

■ How to check the log file

Note: If user settings have been made, return the settings to the original ones after servicing.

1) Perform the setting for the network. (An example is shown below, but the connection is possible in a different way.)
   ① Make preparations for the PC.
   Make the network settings for the PC, assigning the IP address as indicated below:
   IP address : 192.168.0.15
   Subnet mask : 255.255.255.0
   Gateway : 192.168.0.1

   ② Turn off the PC.

   ③ Make the manual settings for the network of the PRV-LX1 on the Function menu (then selecting System, then Network).
   IP address : 192.168.0.16
   Subnet mask : 255.255.255.0
   Gateway : 192.168.0.1

   ④ Turn off the PRV-LX1.
   ⑤ Connect the PRV-LX1 and the PC directly, using an Ethernet cross cable.
   ⑥ Turn on the PRV-LX1 and the PC.

2) Open the log file using a Web browser (IE, etc.).
   Using the Web browser on the PC, access:

   ftp://192.168.0.15

   Enter the following user name and password:

   User : DVDRecService
   Password : DVDRecService

Open the "poweron.log" file using the Web browser.

■ Description on the log file

The log file consists of the following items:

```
POWER-ON=7 ←①
1 : Power On : Mon Jun 23 21:19:26 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
Power Off : Mon Jun 23 22:12:16 EDT 2003 ←③
2 : Power On : Tue Jul 8 10:10:12 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
3 : Power On : Tue Jul 8 10:12:32 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
----- Found a power failure in the previous power on ----- ←④
Power Off : Tue Jul 8 10:15:16 EDT 2003 ←③
4 : Power On : Tue Jul 8 14:10:22 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
!!!!!! The root file system has been recovered !!!!!!!! ←⑤
Power Off : Tue Jul 8 14:12:16 EDT 2003 ←③
5 : Power On : Tue Jul 8 15:10:22 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
!!!!!! NO DECODER BOARD ERROR (REBOOT) !!!!!!!! ←⑥
6 : Power On : Tue Jul 8 16:10:22 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
!!!!!! NO DECODER BOARD ERROR AGAIN !!!!!!!! ←⑦
Power Off : Tue Jul 8 16:12:16 EDT 2003 ←③
7 : Power On : Tue Jul 8 18:10:22 EDT 2003 ←②
Shimuke=x, Region=x,x,x PowerOnKey=xxxxx
```

① Number of times the power was turned on since recording of the log file started (normally, after shipment).
In the example above, the unit was turned on 7 times.

② Date and time the power was turned on

③ Date and time the power was turned off

④ This message indicates that the previous power-off process was not completed normally. If this message appears many times, it is suspected that the HDD is damaged. The user should be urged to turn off the unit using the STANDBY/ON button on the front panel. The user should even be urged to use the UPS (uninterruptible power supply), depending on the power-supply conditions.

⑤ This message indicates that the root file system was damaged because of inappropriate interruption of the power supply, etc., and that automatic restoration has been performed to retry to start up the root file system. This itself does not pose a problem, because restoration has been completed, but if this often occurs, the following problems are suspected:
(1) Because of the poor power-supply conditions on the user's side, sudden power interruptions occurred while the unit was in operation.
(2) Because the HDD was in poor conditions, sometimes files were not read properly.

⑥ This message indicates that the Decoder board was not detected on the first try. In this case, the unit is automatically rebooted, and the unit retries detection of the Decoder board. If this occurs many times, the Decoder board may be defective.

⑦ This message indicates that the Decoder board was not detected on the second try. The application is not started, the error message is displayed on the FL displays, and only the STANDBY/ON button is active. If this occurs many times, the Decoder board may be defective.

7.1.6 Error Log Display

How to display the Error log

- Start the PRV-LX1 and let it run idle (in the state in which the Function menu is not displayed and neither recording nor playback is performed).
- On the remote control unit for service, press the [ESC], [TEST], [REP.A], and [8] keys, in that order. The error log for Drive 1 is displayed.
- To display the error log for Drive 2, press the [ESC], [TEST], [REP.A], and [9] keys, in that order.

Outline of the Error log

Up to 8 error records (16-byte data per record) are held for each drive (see Table 1 "Error record"). If there are more than 8 errors, the oldest record is deleted each time a new one is logged.

Description of the Error log

The order of error generation and error codes are described here.

1. Order of error generation

One byte of data at the beginning of each record (Byte 0) is called the Identity code. The Identity code of the latest record is FFh, and for other records it is 00h. However, if an error is generated for the first time after the power was turned on, FFh is rewritten as BBh. Therefore, from the record having "FFh" Identity code back to the record immediately before that having "BBh" as its Identity code are the error records generated from the latest power-on until the present (or the latest power-off).

Note: At the initial setting, all codes of any record are set FFh. If all codes in a record are FFh, it means that the record has no valid data.

2. Error codes

At Byte 7 of each record, an error code is stored. For details on error codes, see Table 2. Ignore any record whose code for Byte 8 (execute task) is 88h, because it means that the record is for obtaining data on internal status.

Note: The data displayed on the error-log screen are directly dumped from the error-log data stored in memory for the drive, and no process (including data sorting) is added on the part of the PRV-LX1 application.

Table 1: Error record

0	1	2	3	4	5	6	7
Identify	aging No.	aging pointer	controller command	controller step	host command	endeco command	error code
8	9	10	11	12	13	14	15
excute task	error address (H)	erro address (M)	erro address (L)	error detail (H)	error detail (L)	aging cycle (H)	aging cycle (L)

Table 2: Description on error codes

Code	Content	Supplementary information
01h	DECODE_ERROR	Failure in reading PreGap (CD), improper results of RFEndSeek (DVD)
02h	RF_NOT_EXIST,	Read-request address not recorded
03h	RMD_NOT_DETECT,	RMD not detected
04h	LIN_NOT_DETECT,	Lead-in not detected
05h	LIN_NOT_COMPLETE,	Incomplete lead-in
06h	ILLEGALL_NUMBER_OF_BYTE,	Illegal CD mode detected (Illegal Mode for This Track Error)
07h	IF_ABORT_DET,	Processing aborted upon the request of I/F
08h	MECHA_TIMEOUT,	Timeout waiting for search
09h	BUFFERING_TIMEOUT,	Combo Chip decoding not started (the screen is frozen but remains active)
0Ah	RETRY_TIMEOVER,	Number of times of retrial over
0Bh	READ_TIMEOUT,	Timeout waiting for read process
0Ch	RECOVERED_DATA,	"Recovered error" detected
0Dh	VERIFY_ERROR,	An error was generated while the Verify command was being processed
10h	M63_INTERNAL_ERR	Failure in internal processing
11h	M63_FORMATTER_ERR,	Failure in detecting a sync
12h	M63_IDOVER_ERR,	Target-ID exceeded
13h	M63_HDCMP_ERR,	Header-compare error
14h	M63_UNCORRECTABLE_ERR,	Unrecoverable error
15h	M63_CRC_ERR,	CRC error
16h	M63_ETC_ERR,	Other errors of Combo Chip
17h	M63_BLK_ERR,	CIRC unrecoverable error
18h	M63_HDC2_ERR,	Header C2 error
19h	Internal Timeout	Timeout waiting for Combo Chip internal processing
1Ah	M63_TRX_ERR	Failure in transmitting data to the host computer
1Bh	Mecha Not Active	Mechanical-control computer not ready for search (tray opened, etc.)
1Ch	FIFO Error	Internal FIFO error
1Dh	Buffering Abort	Failure in obtaining DVD-data-type information
1Eh	Too Far From Target ID	Improper address after search (too far before the target address)
1Fh	M63 Replay Req.	Combo-Chip decoding not started (the unit arbitrarily returns to idling status)
20h	Buffer Full	
21h	Buffer Under Run	
22h	Panic in	
23h	Discontinuous time data	
24h	Wobble servo phase difference exceeded	
25h	ASYOVR allowable count number exceeded	
26h	ASYNC allowable interpolation number exceeded	
27h	Invalid Cue Sheet	
28h	Non Cue Sheet	
29h	Disc Full	
2Ah	Reserved Track Full	

Code	Content	Supplementary information
2Bh	Address Error	
2Ch	Abort because of a mechanical error	
2Dh	Abort by the host computer	
2Eh	Invalid Command	
2Fh	Target Address Over	
30h	OPC record error (before encoding)	
31h	OPC record error (after encoding)	
32h	OPC playback error (during playback)	
33h	OPC playback error (data error)	
34h	OPC upper limit of power exceeded	
35h	OPC lower limit of power exceeded	
36h	Encode Start Error	
37h	Unexpected Status Error	
38h	CD Over Power Error	
39h	Shock Detect Error	
40h	Buffer full	
41h	Buffer underrun	
42h	Lower OPC power	
43h	Higher OPC power	
44h	OPC failure	
45h	Encoding failure	
46h	DMA failure	
47h	DECSS measures	
48h	Inconsistency in rotation speed of the spindle	
49h	Write power 0	
4Ah	OPC record failure (retry is possible)	
60h	Command Sequence Error */	
61h	Logical Unit Communication Failure */	
62h	Illegal Logical Block Address */	
63h	Internal Controller Error */	
64h	Prevent Medium Removal */	
65h	System Resource Failure */	
66h	Authentication Failure */	
67h	Key Not Present */	
68h	Key Not Established */	
69h	Authentication Not End */	
6Ah	Incompatible Format */	
6Bh	Region Mismatch */	
6Ch	Region Reset Count Error */	
6Dh	De-Compression CRC Error */	

Code	Content	Supplementary information
6Eh	OPC area full */	
6Fh	OPC area almost full */	
70h	Parameter Value Invalied */	
71h	Media detect error */	
72h	RMA almost full */	
73h	Media not Present */	
74h	Long Write In Progress */	
75h	Session is not full */	
76h	Subcode-Q is not valid */	
77h	track start arress is not valid */	
78h	track end arress is not valid */	
79h	track end arress error at incomplete track	
7Ah	Pregap read error	
7Bh	PMA is not complete	
7Ch	Vender reset Sequence Error	
7Fh	Data compare error (for aging)	
80h	Unsupported Command	
81h	Illegal Mode	
82h	Illegal Request	
83h	Aborted	
84h	Timeout	
88h	Loading Mecha NG	
89h	TOC Read Error	
8Ah	PrePit Read Error	
8Bh	BCA READ ERROR	
90h	Search Address Error	
91h	Illegal Track Request	
A0h	No Disc	
A1h	Disc NG	
A8h	Servo NG Stop	
A9h	Line Adjustment NG	
Aah	Auto Adjustment Data NG	
B0h	Focus Close Fail	
B1h	Focus Servo Failure	
B5h	Focus Jump Fail	
B8h	RF not exist	
C0h	Track Close Fail	
C1h	Track Servo NG	
C2h	Track Jump NG	
D0h	Spindle Start Fail	
D1h	Spindle Stop Fail	
D2h	Spindle High Speed Fail	
D3h	Spindle Low Speed Fail	
D4h	Spindle DVD Wob In Fail	
D5h	OPC end search Error	
D6h	RF end search Error	
D7h	Spindle DPLL ON Error	
D8h	Spindle RF Error	
D9h	Tilt Adjustment Error	

7.1.7 Debugging Display Mode

■ How to operate in Debugging Display mode

1) To enter ([ESC] - [DISPLAY])

To enter Debugging Display mode, press the [ESC] key on the remote control unit for service then the [DISPLAY] key.

2) To advance a page ([DISPLAY])

After entering Debugging Display mode, press the [DISPLAY] key. Each time the key is pressed, the page advances by one. You cannot turn the page backward.

3) To advance a subpage ([SIDE-A] or [SIDE-B])

Some pages have subpages. You can advance or go back one subpage using the [SIDE-A] or [SIDE-B] key.

4) To exit ([ESC])

To exit Debugging Display mode, press the [ESC] key. If the [ESC] key then the [DISPLAY] key are pressed to enter Debugging Display mode again, the last page previously displayed is displayed.

■ Description of pages

1) Version information (Page 1)

The version for each program is displayed.

Program : 1.05	← Version of the program (*1)
OS : 1.02	← Version of the OS

DVDRec : 1.90.2.10	← Data to be used by engineers
:	
:	
FLCOM : 137	← Version of the front-panel microcomputer

VD-RW PRV-LX1 1.31U03/05/19 PIONEER	← Version of Drive 1 (*2)
N/A	← Version of Drive 2 (*2)

Shimuke=1 PON=FFFFCFFFF (1/1/-1)	← Data on destination and region (*3)
FAN OK(1)/PSON OK(1) GUID=1500001	← Data on the fans and GUID (*4)

(*1) If "XX.XX-XX" is displayed as the program version, only the OS has been installed, but the application program has not been installed. Install the correct program.

(*2) In the above example, the version of Drive 1 is 1.31U. If "N/A" is displayed, it means that Drive 2 does not exist or is not recognized.

(*3) Breakdown of destination:
0: J (Japan), 1: KU (North America), 2: WY (Europe)
The data on region in the above example are "(1/1/-1)," expressing "(region for the Decoder board/region for Drive 1/region for Drive 2)" ("-1" means that Drive 2 does not exist).

(*4) "OK" is displayed when two fans in the front section and a fan at the rear section (a fan not for the power-supply block) are operating properly. "GUID=xxxxx" is for DV.

2) Disc playback data (Page 2)

The internal data regarding disc playback are displayed.

3) Data on the Decoder board (Page 3)

The data on the Decoder board are displayed. One among several subpages is for the error log for the Decoder board. You can go forward or back one subpage using the [SIDE-A] or [SIDE-B] key. To see the error log for initialization and self-diagnosis, after entering Page 3, press the [SIDE-A] key once. The following screen is displayed.

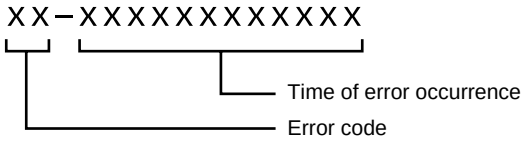
Note: If the Decoder board is defective, in many cases the TV output becomes unavailable. Therefore, the error records explained below may not be confirmed.

The error records are displayed as shown below. If no error was generated in the past, "No device error" is displayed.

```
Device Error History

10-030305210700 40-030306093005
50-030401112233 04-030405131500
```

In the above example, 4 error records are recorded. The first two digits in each record stand for the error type, and the following 12 digits express the time of occurrence:



The time of error occurrence is expressed as "YYMMDDHHMMSS." So, "030110112345" means 11 o'clock 23 min 45 sec, January 10, 2003.

The breakdown of 2-digit error codes is as follows:

1 : Xilinx Configuration Error
Configuration of Xilinx (FPGA for PCI interface) failed.

4 : SH SDRAM Access Error
Reading from or writing in the SDRAM connected to the SH bus failed.

10 : Video Encoder Initialize Error
Communication with the Video Encoder (ADV7172) failed.

20 : AV Decoder Initialization Error
The AV Decoder (M65776AFP) failed to start up, or access to the AV Decoder failed.

40 : AV Decoder SDRAM Access Error
Reading from or writing in the SDRAM connected to the AV Decoder bus failed.

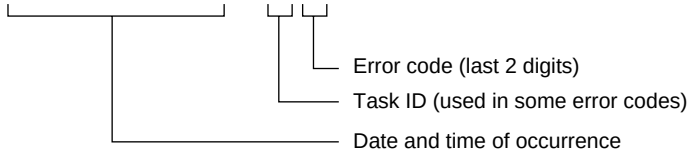
Some of the above errors may occur simultaneously. For example, "50" means the errors of error codes 10 (Video Encoder Initialize Error) and 40 (AV Decoder SDRAM Access Error) were generated at the same time.

4) Data on the Encoder board (Page 4)

The data on the Encoder board are displayed. If the [SIDE-A] key is pressed on this page, the error log for the Encoder board can be checked.

An error record is expressed as shown below:

(Example) 2003/07/01 10:30:20 == 09 03 ==



The meaning of the error codes and correction measures are described below:

Code	Content of Error	Correction Measures
01	Data Read Timeout Error	Turn the power off then on again.
02	Copy Protection Error	As the selected input signal is copy-protected, recording could not be performed. When this error is generated even if the video signal from the disc created by the PRV-LX1 is to be recorded, replace the AVIB board.
03	(task ID : 09(h))Illegal frame number Error	Turn the power off then on again.
	(task ID : 32(h))No digital signal Error	Because no digital signal is input to the selected digital input connectors, recording could not be performed. When this error is generated even if the digital signal is confirmed to be input to the DV connectors, etc., replace the AVIB board.
04	PCI Destination Address Timeout Error	Turn the power off then on again.
05	PCI Map Timeout Error	Turn the power off then on again.
C9	Hard Error	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
CA	Reset Error	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
	(task ID : 0A(hex))Stream Buffer Full Error	Turn the power off then on again.
CB	Initialize Error	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
CC	Standby Error	Turn the power off then on again.
CD	Command Error	Turn the power off then on again.
CE	Stream Timeout Error	Turn the power off then on again.
CF	Command Timeout Error	Turn the power off then on again.
D0	Buffer Full Error	Turn the power off then on again.
D2	Hard Error(Audio Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
D3	Reset Error(Audio Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
D4	Initialize Error(Audio Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
D5	Standby Error (Audio Enc.)	Turn the power off then on again.
D6	Command Error (Audio Enc.)	Turn the power off then on again.
D7	Command Timeout Error (Audio Enc.)	Turn the power off then on again.
DC	Hard Error (Video Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
DD	Reset Error (Video Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
DE	Initialize Error (Video Enc.)	Check wiring or connections. If the problem persists after corrective measures are taken, replace the AVIB board.
DF	Standby Error (Video Enc.)	Turn the power off then on again.
E0	Command Error (Video Enc.)	Turn the power off then on again.
E1	DV Decode Error	Turn the power off then on again.
E2	DV Encode Error	Turn the power off then on again.
E3	FS Change Error (before)	Turn the power off then on again.
E4	FS Change Error (after)	Turn the power off then on again.
E5	Command Timeout Error (Video Enc.)	Turn the power off then on again.
E6	Command Execute Error (Video Enc.)	Turn the power off then on again.

5) Recording data (Page 5)

The internal data on recording are displayed.

6) Application data (Page 6)

The internal data on the application are displayed.

■ Note on the drive error log: The drive error log can be displayed in Test mode.

7.1.8 List of BIOS Setting Value

Customized Default Values	
	Ver3.12P2
Standard CMOS Features	
Date (mm:dd:yy)	G.M.T (Greenwich Mean Time)
Time (hh:mm:ss)	G.M.T (Greenwich Mean Time)
IDE Primary Master	Depends on assembled IDE Device
IDE Primary Slave	Depends on assembled IDE Device
IDE Secondary Master	Depends on assembled IDE Device
IDE Secondary Slave	Depends on assembled IDE Device
Drive A	None
Drive B	None
Video	EGA/VGA
Halt On	All, But Disk/Key
Advanced BIOS Features	
Virus Warning	Disabled
CPU L1 & L2 Cache	Enabled
Quick Power On Self Test	Enabled
First Boot Device	HDD-0
Second Boot Device	CD-ROM
Third Boot Device	Disabled
Boot Other Device	Disabled
Swap Floppy Drive	Disabled
Boot up Floppy Seek	Disabled
Boot up Numlock Status	On
Gate A20 Option	Fast
Typematic Rate Setting	Disabled
Typematic Rate (Chars/Sec)	N/A
Typematic Delay (Msec)	N/A
Security Option	Setup
APIC Mode	Enabled
MPS Version Control For OS	1.4
OS Select For DRAM > 64MB	Non-OS2
Report No FDD For WIN 95	Yes
Small Logo(EPA) Show	Disabled
Advanced Chipset Features	
DRAM Timing Selectable	By SPD
CAS Latency Time	N/A
Active to Precharge Delay	N/A
DRAM RAS# to CAS# Delay	N/A
DRAM RAS# Precharge	N/A
Turbo Mode	Disabled
Memory Frequency For	Auto
System BIOS Cacheable	Enabled
Video BIOS Cacheable	Disabled
Memory Hole at 15M-16M	Disabled
Delayed Transaction	Enabled
Delay Prior to Thermal	16 Min
AGP Aperture Size (MB)	64
On-Chip VGA	Enabled
On-Chip Frame Buffer Size	8MB

Customized Default Values	
	Ver3.12P2
Integrated Peripherals	
IDE DMA transfer access	Enabled
On-Chip Primary PCI IDE	Enabled
IDE Primary Master PIO	Auto
IDE Primary Slave PIO	Auto
IDE Primary Master UDMA	Auto
IDE Primary Slave UDMA	Auto
On-Chip Secondary PCI IDE	Enabled
IDE Secondary Master PIO	Auto
IDE Secondary Slave PIO	Auto
IDE Secondary Master UDMA	Auto
IDE Secondary Slave UDMA	Auto
USB Controller	Enabled
USB 2.0 Controller	Enabled
USB Keyboard Support	Enabled
USB Mouse Support	Enabled
AC97 Audio	Disabled
Init Display First	Onboard/AGP
Onboard LAN	Enabled
Onboard LAN boot ROM	Disabled
IDE HDD Block Mode	Enabled
POWER ON Function	BUTTON ONLY
KB Power ON Password	N/A
Hot Key Power ON	N/A
Onboard FDC controller	Enabled
Onboard Serial Port 1	3F8/IRQ4
Onboard Serial Port 2	2F8/IRQ3
Onboard Parallel Port	Disabled
Parallel Port Mode	N/A
ECP Mode Use DMA	N/A
Power Management Setup	
ACPI Suspend Type	S1(POS)
Run VGABIOS if S3 Resume	N/A
Power Management	User Define
Video Off Method	DPMS
Video Off In Suspend	Yes
Suspend Type	Stop Grant
MODEM Use IRQ	3
Suspend Mode	Disabled
HDD Power Down	Disabled
Soft-Off by PWR-BTTN	Instant-Off
After Power Loss	Stay Off
Wake-Up by PCI card	Enabled
Power On By Ring(S5/DOS)	Disabled
USB KB Wake-Up From S3	N/A

Customized Default Values	
	Ver3.12P2
Power Management Setup	
Resume by Alarm	Disabled
Date(of Month) Alarm	N/A
Time(hh:mm:ss) Alarm	N/A
Reload Global Timer Events	
Primary IDE 0	Disabled
Primary IDE 1	Disabled
Secondary IDE 0	Disabled
Secondary IDE 1	Disabled
FDD,COM,LPT Port	Disabled
PCI PIRQ[A-D]#	Disabled
PnP/PCI Configurations	
Reset Configuration Data	Disabled
Resource Controlled by	Auto(ESCD)
IRQ Resources	N/A
Frequency Control	
Auto Detect PCI Clk	Enabled
Spread Spectrum	Enabled
Set Supervisor Password	Disabled
Set User Password	Disabled

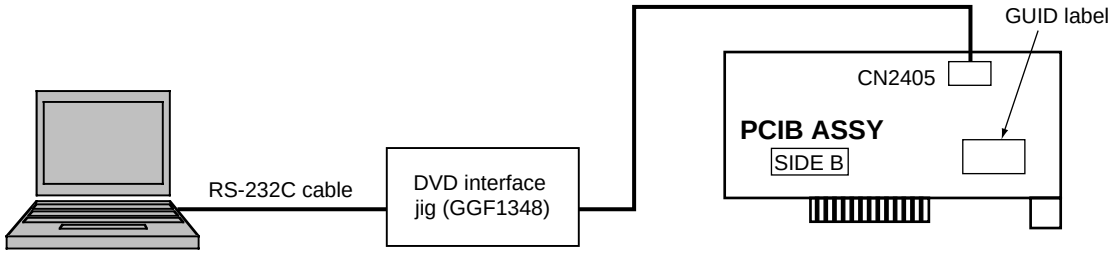
7.1.9 Rewriting of the GUIDs

Notes:
- Because the GUIDs are written on the PCIB Assy before shipping, rewriting of the GUIDs is not necessary when replacing the PCIB Assy.
- When IC2406 (PD6453B8) on the PCIB Assy is replaced, rewriting of the GUIDs is required.

When rewriting the GUIDs, connect the COM port of your PC and the connector for servicing mounted on the PCIB Assy of the unit.
For transmission of commands, use general-purpose RS-232C communication software.
Communication settings are as follows:

Bit rate	: 57600 bps
Data bits	: 8
Parity	: None
Stop bit	: 1
Flow control	: None

Procedures:
1. Take note of the numbers written on the GUID label stuck on the PCIB Assy.
2. Install the PCIB Assy in the unit. Connect the COM port of your PC and CN2405 on the PCIB Assy, using the DVD interface jig (GGF1348).



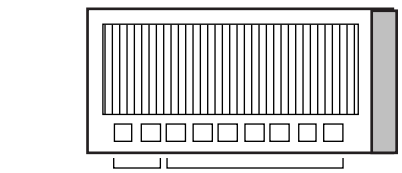
3. Turn the unit on. After the unit starts up, enter "/15*****/SW" from the PC then press [ENTER] key to send the command ("*****" stands for a specific GUID).
   Note: The value written on the GUID label is in decimal notation and must be converted to hexadecimal for writing a command. For details, see "Format of the GUID label."

4. Enter "SR" from the PC then press [ENTER] key to send the command.
   As "GUID: 15*****" is displayed, check that this value is the same as that entered in Step 3.

Format of the GUID label (for reference)

The IEEE1394 Interface is mounted in the unit, and the EUI-64 codes are written in the flash ROM (IC2406) on the PCIB Assy. On the GUID label, this content is described.

1. Printing format
   Label: The part No. of the label is VRW1877.
   Print color: Black
   Printed content: Barcode: CODE128
   Numerics: GUID serial No. (last 7 digits)



2. Relationship between the ID of the Assy and the serial number
   The values written on the Assy are the ID of the product (0x015) and the GUID serial No. specific to each product. The relationship between these numbers and the serial numbers printed on the label is as shown below:

Relationship between the ID of the Assy and the serial number

Values (in hex) to be written on the Assy	Serial numbers (in decimal) printed on the label
01500001	000000001
01500002	000000002
:	:
:	:
015f f f f f	001048575

7.1.10 Cautions on Handling the HDD

(1) Cautions on Handling the HDD

- The HDD is very sensitive to shocks and vibrations. Care must be taken especially during operation (when the power is on).
- The HDD is very sensitive to electrostatic charges.
- Rapid change in temperature or humidity may cause deterioration of the HDD.

Note: After receiving damage caused by any above-mentioned factors, the HDD may operate normally for dozens or some hundreds of hours but then suddenly crash. If you are certain you have damaged a new repair part (HDD) while making repairs, do not use the part.

The HDD is about 10 times as sensitive to shock during operation than during nonoperation.

Reference: Main specifications on damage to the HDD

	During operation	During nonoperation
Shock G (acceleration)	<approx. 20 G	<approx. 200 G
Temperature change	< 20°C/hour	
Moisture change	< 20%/hour	

Reference: Estimate value of falling distance vs. shock (G) when the HDD is dropped without protection

Falling distance \ Landing surface	Granite surface	Concrete floor	Synthetic-resin-coated table	Antistatic sponge
0.5 inch / 1.27 cm	387	217	200	26
1.0 inch / 2.54 cm	595	457	310	37
2.0 inch / 5.08 cm	1133	600	680	70
4.0 inch / 10.16 cm	1795	1040	1050	267

(2) Cautions on handling the product on which the HDD is mounted or the HDD as a repair part, and examples of dangerous handling

[Cautions on handling the product on which the HDD is mounted]

- While the unit is turned on, the HDD is always in operation. Be sure NOT to impart shock to the unit.

● Examples of dangerous handling: while the power is on

- Bumping on the bonnet
- Dropping an object, such as a small screwdriver or remote control unit, onto the bonnet, or bumping an object against the cabinet
- Moving the unit by dragging
- Stacking another product on the unit

Note: Be sure NOT to impart shock, such as bumping or hitting a screwdriver against the HDD, during diagnosis with the bonnet open.

● Examples of dangerous handling: while the power is off

- Imparting strong shock, although the HDD is more resistant to shock when the power is off
- Dropping the unit from a height of several centimeters, or after lifting one side of the unit up, then letting the unit drop.

- Do NOT move the unit immediately after the power is turned off. Wait at least 30 seconds after the indication on the FL display changed from POWER OFF to the clock indication before moving the unit.
  If the AC power cord is accidentally disconnected before turning the unit off, wait at least for one minute before moving it. In this case, damage to the HDD caused by sudden shutoff may be small, because the emergency relief mechanism is activated. However, if sudden shutoff occurs during recording or playback, recorded data may be damaged. Be sure to check operations.

[Cautions on handling the HDD as a repair part]

1. Handle the HDD in a safe environment:
   - Handle the HDD over an antistatic pad that can also absorb shock.
   - Wear wrist bands to prevent electrostatic charges generated in your body from affecting the HDD.

2. The following must be observed when handling the HDD:
   - Handle one HDD at a time. Do NOT hold several HDDs at the same time.
   - Grip the HDD on both sides so that you do not touch its terminals or circuit boards.
   - Do NOT stack one HDD onto another HDD (even if the HDDs are protected in antistatic bags).
   - Do NOT bump the HDDs against one another.
   - Do NOT bump any tool, such as a screwdriver, or other hard object against the HDD.
   - When a repair part (HDD) is transported and there is a large temperature difference between outdoors and indoors, to the indoor, leave it in its package for about a half day to gradually cool or warm the HDD to room temperature before unpacking it.

[Notes on packing for shipment]

- When returning a defective HDD for analysis, handle with care as if it were a good product. Otherwise, the results of analysis may not be correct.
- When packing, use the antistatic bag and packing materials in which the repair part for service was delivered. Attach a copy of the slip for service or a memo stating symptoms in as much detail as possible.

■ Outline and part No. of the HDDs

Model Name	Capacity	Maxtor	
		Pioneer's Part No. (for service)	Manufacturer's Part No.
PRV-LX1	120 Gbyte	VXF1016	4R120L*

* Pioneer's part No. is not stamped.

- When replacing the HDD, carefully check the capacity and manufacturer's part No. on the part label to avoid replacing with a similar but inappropriate product. You can also check the model No. of the mounted HDD on the Service mode screen.
- Do NOT use repair parts, such as commercially available HDDs, other than those designated above, as their functions, performance or reliability cannot be guaranteed.

● **Maxtor**

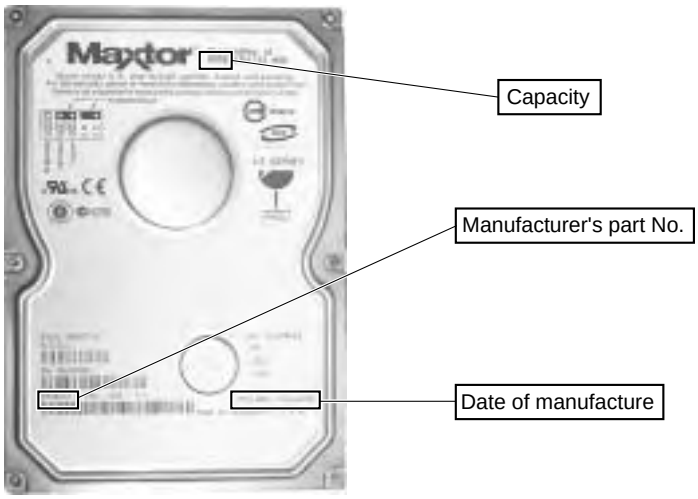


Fig. 1 Location of the data on capacity and part No. of the HDD

■ JP pin setting for the HDD

The factory jumper-pin setting for the HDD is CS (Cable Select), as shown in the figure below.
When installing the HDD to the unit, set the jumper pin to the MASTER position.

● **Maxtor**

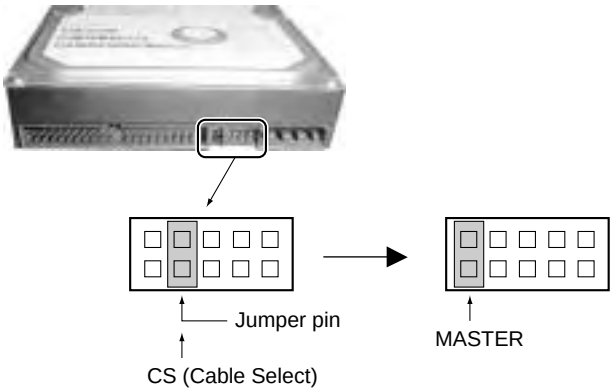


Fig. 2 Setting of the jumper pin

7.1.11 HDD Replacement Procedures

■ In a case where the HDD being installed operates normally, but is to be replaced for maintenance, etc. → Perform copying of HDD data.

1. Obtain an HDD copying disc for the PRV-LX1 and a new HDD *1. (Do NOT connect the HDD in this step.)

2. In Standby mode, while holding the [ENTER] button pressed, press the [STANDBY/ON] button on the front panel to start up the unit.

3. When the tray for Drive 1 opens, load the HDD copying disc for the PRV-LX1 into it. Then hold the [ENTER] button on the front panel pressed until the beep sounds.

4. After the unit is automatically shut off, set the POWER switch on the rear panel to OFF. Then make preparations for the HDD, as follows:
   IMPORTANT: During the following procedures, be sure NOT to impart shock to the HDD.
   (1) Remove the built-in HDD from the unit. Change the position of the jumper pin from MASTER to SLAVE. Connect the IDE cable for Drive 2 ("Secondary" cable) and the power cable.
   IMPORTANT: Be careful that the PCB block of the HDD does not come into contact with any other electric circuit block (to avoid short-circuiting of the HDD).
   (2) Set the jumper pin of the new HDD to the MASTER position and install the new HDD in the place where the built-in HDD was. Connect the IDE cable ("Primary" cable) and the power cable.

5. Set the POWER switch on the rear panel to ON then press the [STANDBY/ON] button on the front panel to turn the unit on. The HDD copying disc for the PRV-LX1 is automatically started, and the following message is displayed on the monitor screen:

   Welcome to Pioneer DVD Recorder HDD Backup Program
   Data = 2003.09.02....

   Press appropriate front panel button for 2 seconds
   followed by [ENTER] button for 2 seconds.
   1)[UP] Full Copy (Secondary/Slave –> Primary/Master)
   2)[DOWN] Quit

6. Hold the [UP] button on the front panel pressed at least 2 seconds then hold the [ENTER] button pressed at least 2 seconds. Copying of data from the old HDD to the new HDD starts. (The time required for copying varies depending on the amount of user data, but the approximate maximum time is 2 hours.)

7. After copying is completed, the disc is automatically ejected, then the unit restarts. Check operations after startup is completed. If there is no problem, turn off the unit.

8. Set the POWER switch on the rear panel to OFF. Disconnect the old HDD connected to the cables from Drive 2.

9. Check the cable connections.
   Note: If Drive 2 is available, make the connections as they were originally made.

*1 If an HDD that has already been used with another unit is to be used as a new HDD (copy-destination HDD), copying cannot be done if there are project data on that HDD. In this case, first delete all project data from the HDD, using the Function menus. When using a reused HDD without project data, copying of only the user's data becomes possible. In this case, the following optional menu is added in the message displayed in Step 5:

   3)[LEFT] DATA Copy (Secondary/Slave –> Primary/Master)

■ In a case where the HDD being installed does not physically operate → After replacement of the HDD, reinstall the software program.

1. After checking that the POWER switch on the rear panel is set to OFF, replace the built-in HDD with a new one.
   IMPORTANT: During the following procedures, be sure NOT to impart shock to the HDD.

2. Using the forced-eject pin (DEX1008), open the tray for Drive 1 then load the OS installation disc for the PRV-LX1 into the tray. **Note:** Push the tray in a little then turn on the power.

3. Following the procedures for "OS installation," install the OS, using the OS installation disc for the PRV-LX1.
   See "7.1.14 How to Install the OS or Program."

4. Following the procedures for "Program installation," install the program, using the Program installation disc for the PRV-LX1.
   See "7.1.14 How to Install the OS or Program."

7.1.12 How to check the HDD

• How to check the HDD that is mounted on the product is described below:

① Select Function Menu, Setup, System, HDD Tools, then Check, and execute. "HDD File System Check" is executed, and recoverable errors are corrected. The results can be checked on the monitor screen.

② The HDD check can also be performed from the following menu displayed during OS installation:
(1) [UP] : Full Install (Delete all data)
(2) [DOWN] : Install (Keep user's data)
(3) [LEFT] : HDD File System Check
(4) [RIGHT] : HDD Test (Bad Block Check)
(5) [SCAN R] : Quit

Select (3) or (4), and execute. The result can be checked on the monitor screen.
For details on how to enter the menu, see "OS installation" in "7.1.14 How to Install the OS or Program."

Notes:
• An HDD Test (4 above) may take 10 hours or more, depending on the capacity of the HDD.
• If the menu does not appear in the process of the normal OS installation procedures, change the setting of BIOS "First Boot Device" to CD-ROM then restart the unit from the OS installation disc.
• In the above case, after the HDD Check is finished, be sure to return the setting of BIOS "First Boot Device" to HDD.

7.1.13 Cleaning

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

• Pickup

Position to be cleaned	Cleaning tools
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

• Fan

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

7.1.14 How to Install the OS or Program

■OS installation

① While holding the [ENTER] button on the front panel pressed, press the [STANDBY/ON] button to start the unit.

② "PGM-INSTALL" is displayed on the FL display, and the tray for the DVD Drive opens.

Display on the monitor screen:

```
----------------------------------------
- PRV-LX1 Program Installer -
----------------------------------------
PLEASE INSERT INSTALLATION CD IN DRIVE ONE,
THEN PRESS [ENTER] BUTTON ON FRONT PANEL
FOR 2 SECONDS TO BEGIN UPDATE.
>>
```

③ Load the OS installation disc into the tray then press the [ENTER] button. The tray will close, and changing of the BIOS settings starts.

Display on the FL display:
DOWNLOAD FULL

Display on the monitor screen:

```
=======================
= PRV-LX1 Program Installer =
=======================

The PRV-LX1 will automatically start power off
after 5 seconds later.
Please press the power button after power off.

PLEASE WAIT A MINUTE.
Completed changing the BIOS settings.
```

④ When the unit is automatically turned off, turn it back on.

⑤ If the following menu* appears on the screen, select the operation you wish. Use the corresponding buttons on the front panel for selection. (For example, press the [UP] button to select full installation.)

(1) [UP] : Full Install (Delete all data)
(2) [DOWN] : Install (Keep user's data)
(3) [LEFT] : HDD File System Check
(4) [RIGHT] : HDD Test(Bad Block Check)
(5) [SCAN R] : Quit

(1) [UP]: Full Install (Delete all data)
- The whole HDD is formatted, then the OS is installed.
- All data, including the user data, are deleted. Installation is completed in about 10 minutes, then rebooting starts.
- During installation, the progress is displayed on the screen. If the screen does not change after about 15 minutes, or if the installation process has not been completed after about 30 minutes, turn off the power and restart the OS installation process. If installation cannot be completed on the second try, replace the HDD.

IMPORTANT!: After OS installation, be sure to install the program.

(2) [DOWN]: Install (Keep user's data)
- Only the OS is installed, leaving the user's data intact. This does not mean, however, that the integrity of the user's data is guaranteed.
- Installation is completed in about 8 minutes, then rebooting starts.
- During installation, the progress is displayed on the screen. If the screen does not change after about 15 minutes, or if the installation process has not been completed after about 30 minutes, turn off the power and restart the OS installation process. If installation cannot be completed on the second try, replace the HDD.

IMPORTANT!: After OS installation, be sure to install the program.

(3) [LEFT]: HDD File System Check
- A logical check of all files on the HDD is performed, then the results are displayed.
- To return to the menu, press the [ENTER] button on the front panel.

(4) [RIGHT]: HDD Test (Bad Block Check)
- A physical check of the HDD is performed, then the results are displayed. It must be noted that this test takes 10 hours or more.
- To return to the menu, press the [ENTER] button on the front panel.

(5) [SCAN R]: Quit
- To terminate the installation program and start rebooting

***With some installation discs for production lines, full installation starts automatically, without displaying the menu.**

⑥ Execute the selected item.
- After execution, rebooting starts automatically.

⑦ Turn off the power.

⑧ Start up the unit by pressing the [STANDBY/ON] button on the front panel, then make sure that the version of the OS is updated, using the Debug screen (ESC + DISP).

⑨ Proceed to program installation.

■ Program installation

① Hold the [ENTER] button on the front panel pressed and press the [STANDBY/ON] button to start up the unit.

② "PGM-INSTALL" is displayed on the FL display, and the tray for the DVD drive opens.

Display on the monitor screen:

```
----------------------------------------
- PRV-LX1 Program Installer -
----------------------------------------
PLEASE INSERT INSTALLATION CD IN DRIVE ONE,
THEN PRESS [ENTER] BUTTON ON FRONT PANEL
FOR 2 SECONDS TO BEGIN UPDATE.
>>
```

③ Load the program installation disc into the tray and press the [ENTER] button on the front panel. The tray will close, and upgrading of the version starts.

Display on the FL display:
DOWNLOAD FULL

Display on the monitor screen:

```
==============================
= PRV-LX1 Program Installer =
==============================

Setup Directories ...
Start Program Download ...
= Setup Drives. =       --> The message changes according to the progress.
====                    --> Progress bar
```

④ When installation is finished, the PRV-LX1's startup display appears on the monitor screen, the tray for DVD Drive opens, and "DOWNLOAD COMPLETED" is displayed on the FL display. Then the unit is automatically turned off.

⑤ Start up the unit by pressing the [STANDBY/ON] button on the front panel, then make sure that the version of the program is updated, using the Debug screen (ESC + DISP).

Note: If a program whose version is older than the currently installed one is to be installed, the following message is displayed:

On the monitor screen:

```
Current Version : 1.07
Installation CD Version : 1.05
Newer version programs have already been installed.
Press appropriate front panel button for 2 seconds
followed by [ENTER] button for 2 seconds.
(1) [ UP ] Force to install
(2) [ DOWN ] Quit.
>>
```

• To continue the installation process, press the [UP] button then the [ENTER] button on the front panel.

Operation	Sequence	Symptom	Check Item	Measures to be taken
Startup	From power on, supply of STB + 5 V power, to startup of the FL microcomputer STB_LED: Orange	The unit does not enter Standby mode even if the POWER switch is set to ON.	Check the following connections: The LED (D10) for STB +5 V power supply on the PWRB remains unlit: Disconnect the cable that connects the PWRB (CN3) and FLKB (CN501) then turn on the power. → D10 lights up. Disconnect the cable that connects the PWRB (CN3) and FLKB (CN501) then turn on the power. → D10 remains unlit. The LED (D10) for STB +5 V power supply on the PWRB is lit:	Check the connections for the ATX power supply, PWRB, and FLKB: Reconnect the 20-pin cable of the ATX power supply (DXF1001), or replace the ATX power supply. If it is suspected that the FLKB (DWZ1118) is defective, replace it. If it is suspected that the PWRB (DWZ1106) is defective, replace it. Replace ICP (IC8) on the PWRB (DWZ1106). Reconnect or replace the 20-pin cable (DKP3637) between the PWRB (CN3) and FLKB (CN501). If it is suspected that the FLKB (DWZ1118) is defective, replace it.
	STB_SW ON	Even if the STB switch is pressed, its indicator remains lit in orange, and the unit does not start.	Check the following connections: The PWR_SW on the PWRB is set to L: The LED (D19) for STB +5 V power supply for the MB on the PWRB remains unlit. The PWR_SW on the PWRB is set to H: The LED (D19) for STB +5 V power supply for the MB on the PWRB is lit.	Check the connections for the FLKB, PWRB, and MB: Reconnect or replace the 20-pin cable (DKP3637) between the PWRB and FLKB. If it is suspected that the FLKB (DWZ1118) is defective, replace it. If it is suspected that the PWRB (DWZ1106) is defective, replace it. Reconnect or replace the 20-pin cable (DKP3657) between the MB and PWRB. If it is suspected that the MB (DXF1002) is defective, replace it.
	STB_LED: Green	Even if the STB switch is pressed, its indicator remains lit in green, and the unit does not start.	Check the following connections: PWR_SW2 on the PWRB is set to L: PWR_SW2 on the PWRB is set to H: The LEDs (D11, D12, and D13) for power supply on the PWRB remain unlit. The LEDs (D11, D12, and D13) for power supply on the PWRB are lit.	Check the connections for the ATX power supply, PWRB, MB, and FLKB: Reconnect or replace the 20-pin cable (DKP3637) between the PWRB and FLKB. If it is suspected that the FLKB (DWZ1118) is defective, replace it. Reconnect or replace the 6-pin to 9-pin cable (DKP3635) between the MB and PWRB. If it is suspected that the MB (DXF1002) is defective, replace it. Reconnect the 20-pin cable of the ATX power supply (DXF1001), or replace the ATX power supply. Reconnect or replace the 20-pin cable (DKP3637) between the PWRB (CN3) and FLKB (CN501). If it is suspected that the FLKB (DWZ1118) is defective, replace it. If it is suspected that the PWRB (DWZ1106) is defective, replace it.
	Startup of the ATX power, start of the FL display		Misc.: Black screen (POST screen not displayed)	Reinstall or replace the CPU and the memory module. Clear the data in the CMOS RAM for BIOS (by short-circuiting Pins 1 and 2 of the JP14 jumper switch on the MB).
	BIOS startup	Even if the STB switch is pressed, the message on the FL display remains "PLEASE WAIT," and the unit does not start.	Check the connections (for power supply)	Check the connections between the ATX power supply and the HDD, or among the ATX power supply, PWRB, and MB: Reinstall the power supply for peripheral devices between the ATX power supply and the HDD. Or replace the ATX power supply. Reconnect or replace the 4-pin cable (DKP3656) for power supply for the CPU on the MB (PWR_P4).
			Check the connections (for signals)	Check the connections between the MB and HDD, or the MB and FLKB: Reconnect or replace the IDE flat cable (DKP3647) between the MB and HDD. Reconnect or replace the 3-pin to 10-pin cable (DKP3645) between MB and FLKB (CN504).
	Searching for the boot drive		VGA screen display "CMOS checksum error - Defaults loaded"	If the battery is discharged (2.5 V DC or less), replace it. If it is suspected that the MB (DXF1002) is defective, replace it. If checking of BIOS data fails, press the F1 key then reload the BIOS data.
			"Non-System Disk or Disk error, Replace and press any key when ready"	If the data on the HDD are damaged, reinstall the data. If it is suspected that the HDD (VXF1015) is defective, replace it.
			"Detecting IDE drivers . . . "	The settings for the connected HDD or DVD Drive are wrong: If it is suspected that the HDD (VXF1016) is defective, replace it. If it is suspected that the DVD Drive (DVR-105-PLX) is defective, replace it.
			"DISK BOOT ERROR, INSERT SYSTEM DISK AND PRESS ENTER"	Check on the BIOS screen if the HDD is recognized: Set the jumper pin of the HDD to MASTER. If it is suspected that HDD (VXF1016) is defective, replace it.
			Beep sounds: One long Two long Two short-long combinations	 This means a memory error. Reinstall or replace the DDR memory module. This means a memory error. Reinstall or replace the DDR memory module. This means a video error. If it is suspected that the MB (DXF1002) is defective, replace it.
			Misc.: Noise from the HDD	If it is suspected that the HDD (VXF1015) is defective, replace it. If it is suspected that the FLKB (DWZ1118) is defective, replace it. If it is suspected that the MB (DXF1002) is defective, replace it.

Operation	Sequence	Symptom	Check Item	Measures to be taken
Startup	Execution of startup script	The following message is displayed on the FL display: "FSCK-ERROR BOOT/USR"		Reinstall the OS (Installation leaving the user's data intact is also possible).
		The following message is displayed on the FL display: "FSCK-ERROR HOME"		Reinstall the OS (Installation leaving the user's data intact is also possible).
		The following message is displayed on the FL display: "FSCK-ERROR VAR"		Reinstall the OS (Installation leaving the user's data intact is also possible).
		The following message is displayed on the FL display: "POWER ON FSCK-ERROR"		Reinstall the OS (Installation leaving the user's data intact is also possible).
		The following message is displayed on the FL display: "NO BOARD ENCODER"	Check the connections. The "Xilinx_STA" LED on the PCIB remains unlit during startup. The "Encode_STA" LED on the PCIB remains lit during startup.	Check attachment of the PCI card to the DECB and MB. It is suspected that the PCIB (DWP1080) is defective replace it. It is suspected that the PCIB (DWP1080) is defective, replace it.
			Misc.: Check the power of the PCIB (DWP1080): D2101: The LED for -12 V power supply remains unlit D2102: The LED for +12 V power supply remains unlit D2301: The LED for +5 V power supply remains unlit The message "!!!!!!!!!!NO ENCODER BOARD ERROR AGAIN!!!!!!!!!!" is displayed in the log file.	Check the LED for power supply on the PCIB (DWP1080). It is suspected that the PCIB (DWP1080) is defective, replace it. It is suspected that the PCIB (DWP1080) is defective, replace it. It is suspected that the PCIB (DWP1080) is defective, replace it. Reinstall the PCIB (DWP1080).
		The following message is displayed on the FL display: "NO BOARD ENCODER"	Check the connections. The "Xilinx_STA" LED on the DECB remains unlit during startup. The "Decode_STA" LED on the DECB remains lit during startup.	Check attachment of the PCI card to the DECB and MB. It is suspected that the DECB (DWP1081) is defective,replace it. It is suspected that the DECB (DWP1081) is defective,replace it.
			Misc.: Check the power supply for the DECB (DWP1081): The LED (D1137) for +1.8 V power supply is unlit. The message "!!!!!!!!!!NO DECODER BOARD ERROR AGAIN!!!!!!!!!!" is displayed in the log file.	Check the LED for power supply on the DECB (DWP1081). It is suspected that the DECB (DWP1081) is defective,replace it. If it is suspected that ICP (IC1351) is broken, replace it. Reinstall the DECB (DWP1081).
	Starting application	Even if the STB SW is pressed, the message on the FL display remains "000. . . ." and the unit does not start.	Check the connections: The "Xilinx_STA" LED on the AVIB remains unlit during startup. The "Encode_STA" LED on the AVIB remains lit during startup. The "Xilinx_STA" LED on the PCIB remains unlit during startup. The "Encode_STA" LED on the PCIB remains lit during startup.	Check the connections between the AVIB and PCIB. Reconnect the 50-pin FFCs (DDD1226) that connect the AVIB (CN3001 and CN3002) and PCIB (CN2103 and CN2104), or replace them. Reconnect or replace the 4-pin cable (DKP3640) that connects the AVIB (CN3301) and PCIB (CN2101). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it.
	Completion of application startup		Misc.: Check the positions of the jumper pins in DVD Drive 1 and Drive 2.	Set the jumper pin of Drive 1 to MASTER and that of Drive 2 to SLAVE.

Operation	Symptom	Check Item	Measures to be taken
Recording/ playback	No input to the RCA, XLR, CVBS, S, YCbCr, and DV connectors (signals cannot be output or recorded during preview or recording)	Check the connections (for power supply): The LEDs for power supply (D3201, D3202, D3203, and D3204) on the AVIB remain unlit. When the AVIB (CN3201) connector is disconnected, no DC voltage is applied to the PWRB connector pin. When the AVIB (CN3201) connector is disconnected, DC voltage is applied to the PWRB connector pin. The LEDs for power supply (D7619, D7620, D7621, and D7622) on the JKIB remain unlit. When the JKIB (CN7613) connector is disconnected, no DC voltage is applied to the AVIB connector pin. When the JKIB (CN7613) connector is disconnected, DC voltage is applied to the AVIB connector pin. The LEDs for power supply (D2101, D2102, and D2301) on the PCIB remain unlit.	Check the connections for the PWRB, AVIB and JKIB, and connections between MB and PCIB: Reconnect or replace the 14-pin cable (DKP3636) between PWRB (CN2) and AVIB (CN3201). If it is suspected that the PWRB (DWZ1106) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. Reconnect or replace the 7-pin cable (DKP3639) between AVIB (CN3201) and JKIB (CN7613). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that JKIB (DWZ1120) is defective, replace it. Securely reinstall the PCIB (DWP1080) on the MB. If it is suspected that the PCIB (DWP1080) is defective, replace it.
	No input to the RCA and XLR No input to the CVBS, S, and YCbCr connectors	Check the connections (for AV signals): No analog signal input to the AVIB connector pin Analog signal is input to the AVIB connector pin. The "Xilinx_STA" LED on the AVIB remains lit during encoding. The "Encode_STA" LED on the PCIB randomly lights during encoding.	Check the connections for the JKIB, AVIB, and PCIB: Reconnect or replace the 20-pin FFC (DDD1228) that connect AVIB (CN3501) and JKIB (CN7611). If it is suspected that JKIB (DWZ1120) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. Reconnect or replace the two 50-pin FFCs (DDD1226) that connect the AVIB (CN3001 and CN3002) and PCIB (CN2103 and CN2104). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the PCIB (DWP1080) is defective, replace it.
	No input to the DV connector "NO DV INPUT" displayed	The "Xilinx_STA" LED on the AVIB remains lit during encoding. The "Encode_STA" LED on the PCIB randomly lights during encoding.	Reconnect or replace the 6-pin cable (DKP3658) between the AVIB (CN4001) and JKIB (CN7402). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the PCIB (DWP1080) is defective, replace it.
		Check which of the following will be the case: No THRU output even with the SOURCE MONITOR setting The THRU output is available with the SOURCE MONITOR setting. Playback is possible. Recording is possible.	If it is suspected that JKIB (DWZ1120) is defective, replace it. If it is suspected that the JKOB (DWZ1121) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that JKIB (DWZ1120) is defective, replace it. If it is suspected that the DECB (DWP1081) is defective, replace it.
		Check the format. Check the input source.	Check the format of connected devices. If the input source is copy-protected, it cannot be recorded.
	No output from the RCA, XLR, SPDIF, CVBS, S, YCbCr, and DV connectors (signals cannot be output during playback)	Check the connections (for power supply): The LEDs for power supply (D3201, D3202, D3203, and D3204) on the AVIB remain unlit. When the AVIB (CN3201) connector is disconnected, no DC voltage is applied to the PWRB connector pin. When the AVIB (CN3201) connector is disconnected, DC voltage is applied to the PWRB connector pin. The LEDs for power supply (D7619, D7620, D7621, and D7622) on the JKIB remain unlit. When the JKIB (CN7613) connector is disconnected, no DC voltage is applied to the AVIB connector pin. When the JKIB (CN7613) connector is disconnected, DC voltage is applied to the AVIB connector pin. The LED (D1137) for power supply on the DECB remains unlit.	Check the connections for the PWRB, AVIB, and JKIB, and connections between the MB and DECB: Reconnect or replace the 14-pin cable (DKP3636) between PWRB (CN2) and AVIB (CN3201). If it is suspected that the PWRB (DWZ1106) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. Reconnect or replace the 7-pin cable (DKP3639) between AVIB (CN3201) and JKIB (CN7613). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that JKIB (DWZ1120) is defective, replace it. Securely reinstall the DECB (DWP1081) on the MB. If it is suspected that the DECB (DWP1081) is defective, replace it.
	No output from the RCA, XLR, and HP connectors No output from the CVBS, S, and YCbCr connectors No output from the DV connector	Check the connections (for AV signals): The "Decode_STA" LED (D1182) on the DECB remains unlit during decoding. The "Decode_STA" LED (D1182) on the DECB flashes during decoding. Check if there is analog output other than the DV output. → No Check if there is analog output other than the DV output. → Yes The THRU output is available with the SOURCE MONITOR setting. No THRU output even with the SOURCE MONITOR setting.	Check the connections for the DECB, JKIB, and JKOB: Reconnect or replace the 30-pin FFC (DDD1229) that connects the DECB (CN1811) and JKIB (CN7801). If it is suspected that the DECB (DWP1081) is defective, replace it. If it is suspected that JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 6-pin cable (DKP3658) between the AVIB (CN4001) and JKIB (CN7402). Reconnect or replace the 30-pin FFC (DDD1229) that connects the AVIB (CN1651) and DECB (CN6002). Reconnect or replace the 14-pin cable (DKP3636) between PWRB (CN2) and AVIB (CN3201). If it is suspected that the AVIB (DWV1198) is defective, replace it. Reconnect or replace the 30-pin FFC (DDD1229) that connects the DECB (CN1811) and JKIB (CN7801). If it is suspected that JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 30-pin FFC (DDD1230) that connects the JKIB (CN7802) and JKOB (CN7851). If it is suspected that the JKOB (DWZ1121) is defective, replace it.

Operation	Symptom	Check Item	Measures to be taken
Recording/ playback	No output from the CVBS or S terminal	Check to see if the Progressive signal is set to be output.	To change the setting, run the unit idle then press the DOWN then STOP keys.
	No video or audio output even with the SOURCE MONITOR setting	Check input/output settings. The LEDs (D3201, D3202, D3203, and D3204) for power supply on the AVIB remain unlit. Disconnect the 7-pin cable that connects the AVIB (CN3202) and JKIB (CN7613). → No DC voltage applied to the terminals Disconnect the 7-pin cable that connects the AVIB (CN3202) and JKIB (CN7613). → DC voltage applied to the terminals The LEDs (D7619, D7620, D7621, and D7622) for power supply on the JKIB remain unlit. Is the THRU_SW signals from the AVIB switched? Disconnect the 20-pin FFC cable that connects the AVIB (CN3501) and JKIB (CN7611). → THRU_SW signal from the AVIB is set to L. Disconnect the 20-pin FFC cable that connects the AVIB (CN3501) and JKIB (CN7611). → THRU_SW signal from AVIB is set to H.	On the Function menu, set AV INPUT to CVBS or RCA, then input the corresponding signal. Reconnect or replace the 14-pin cable (DKP3636) between the PWRB (CN2) and AVIB (CN3201). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 7-pin cable (DKP3639) between the AVIB (CN3202) and JKIB (CN7613). If it is suspected that the JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 20-pin FFC (DDD1228) that connects the AVIB (CN3501) and JKIB (CN7611). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 30-pin FFC (DDD1230) that connects the JKIB (CN7802) and JKOB (CN7851). If it is suspected that the JKOB (DWZ1121) is defective, replace it.
	No HP audio output	Check the connections (for power supply): The LEDs (D3201, D3202, D3203, and D3204) for power supply on the AVIB remain unlit. Disconnect the AVIB (CN3201) connector. → No DC voltage applied to the PWRB connector pin Disconnect the AVIB (CN3201) connector. → DC voltage applied to the PWRB connector pin The LEDs (D7619, D7620, D7621, and D7622) for power supply on the JKIB remain unlit. Disconnect the AVIB (CN3202) connector. → No DC voltage applied to the AVIB connector pin Disconnect the AVIB (CN3202) connector. → DC voltage applied to the AVIB connector pin The LED (D661) for power supply on the HPVB remain unlit. Disconnect the HPVB (CN7701) connector. → No DC voltage applied to the JKIB connector pin Disconnect the HPVB (CN7701) connector. → DC voltage applied to the JKIB connector pin	Check the connections for the PWRB, AVIB, JKIB, and HPVB: Reconnect or replace the 14-pin cable (DKP3636) between the PWRB (CN2) and AVIB (CN3201). If it is suspected that the PWRB (DWZ1106) is defective, replace it. If it is suspected that the AVIB (DWV1198) is defective, replace it. Reconnect or replace the 7-pin cable (DKP3639) between the AVIB (CN3202) and JKIB (CN7613). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 8-pin cable (DKP3643) between the JKIB (CN7701) and HPVB (CN661). If it is suspected that the JKIB (DWZ1120) is defective, replace it. If it is suspected that the HPVB (DWZ1115) is defective, replace it.
		Check the connections (for audio signals): Audio not output from the HP, RCA, and XLR connectors Audio not output only from the HP connector	Check the connections for the DECB, JKIB, and HPVB: Reconnect or replace the 30-pin FFC (DDD1229) that connects the DECB (CN1811) and JKIB (CN7801). If it is suspected that the DECB (DWP1081) is defective, replace it. If it is suspected that the JKIB (DWZ1120) is defective, replace it. Reconnect or replace the 8-pin cable (DKP3643) between the JKIB (CN7701) and HPVB (CN661). If it is suspected that the HPVB (DWZ1115) is defective, replace it.
	DVD recording/playback impossible	Check the connections: Press Function, and check the lower-right part of the screen to see if the connected drive is recognized. No DVD1 indication No DVD2 indication	Check the connections between the MB and DVD_Drives 1-2, and between the ATX power supply and DVD_Drives 1-2. Reconnect or replace the IDE cable (DKP3648) between MB and DRV: If it is suspected that the DVD Drive 1 (DVR-105-PLX) is defective, replace it. If it is suspected that the DVD Drive 2 (DVR-105-PLX) is defective, replace it. Reinstall the power supply for peripheral devices between the ATX power supply and the DVR. Or replace the ATX power supply.
		Check the media you use.	Use a DVD-R or DVD-RW disc whose standard is supported by this unit.
		Check the input source.	If the input source is copy-protected, it cannot be recorded.
	ENCODER ERROR "FF000002" is displayed on the screen. Preview impossible	Check the connections.	Check the connections between the AVIB and PCIB: Reconnect or replace the two 50-pin FFCs (DDD1226) that connect AVIB (CN3001 and CN3002) and PCIB (CN2103 and CN2104). If it is suspected that the AVIB (DWV1198) is defective, replace it. If it is suspected that the PCIB (DWP1081) is defective, replace it.
	No synchronization with the external sync	Check the connections: The LEDs (D7925, D7926, and D7927) for power supply on the JKDB remain unlit. Disconnect the JKDB (CN7902) connector. → No DC voltage applied to the PCIB connector pin Disconnect the JKDB (CN7902) connector. → DC voltage applied to the PCIB connector pin Check the signals.	Check the connections between the PCIB and JKDB, and between the DECB and JKDB: Reconnect or replace the 11-pin cable (DKP3642) between the PCIB (CN2102) and JKDB (CN7902). If it is suspected that the PCIB (DWP1081) is defective, replace it. If it is suspected that the JKDB (DWZ1117) is defective, replace it. Reconnect or replace the 2-pin cable (DKP3638) between the DECB (CN1471) and JKDB (CN7941).

Operation	Symptom	Check Item	Measures to be taken
Misc	No operation possible with a USB device (mouse/keyboard) connected to one of the USB connector on the front panel	Check the connections: The LED (D681) for the power supply on the USBB remains unlit: Disconnect the USBB (CN684) connector. → No DC voltage applied to the PWRB connector pin Disconnect the USBB (CN684) connector. → DC voltage applied to the PWRB connector pin Check the USB signal.	Check the connections between the PWRB and USBB, and the MB and USBB. Reconnect or replace the 3-pin cable (DKP3655) for power supply between the PWRB (CN5) and USBB (CN684). If it is suspected that the PWRB (DWZ1106) is defective, replace it. If it is suspected that the USBB (DWZ1109) is defective, replace it. Reconnect or replace the 10-pin cable (DKP3646) for USB communication between the MB and USBB (CN681). If it is suspected that the MB (DXF1002) is defective, replace it. If it is suspected that the USBB (DWZ1109) is defective, replace it.
	Control from an external device through RS-422 impossible	Check the connections: The LEDs (D7925, D7926, and D7927) for the power supply on the JKDB remains unlit: Disconnect the JKDB (CN7902) connector. → No DC voltage applied to the PCIB connector pin Disconnect the JKDB (CN7902) connector. → DC voltage applied to the PCIB connector pin Check the settings and connected devices.	Check the connections among the PCIB, JKDB, and 422IB: Reconnect or replace the 11-pin cable (DKP3642) between the PCIB (CN2102) and JKDB (CN7902). If it is suspected that the PCIB (DWP1081) is defective, replace it. If it is suspected that the JKDB (DWZ1117) is defective, replace it. Reconnect or replace the 6-pin cable (DKP3644) between the JKDB (CN7903) and 422IB (CN7952). The external RS-422 device may be one that cannot control this unit. → Refer to the Web site of Pioneer.
	Control of an external device through RS-422 impossible	Check the connections: The LEDs (D7925, D7926, and D7927) for the power supply on the JKDB remains unlit: Disconnect the JKDB (CN7902) connector. → No DC voltage applied to the PCIB connector pin Disconnect the JKDB (CN7902) connector. → DC voltage applied to the PCIB connector pin Check the settings and connected devices.	Check the connections between the PCIB and JKDB: Reconnect or replace the 11-pin cable (DKP3642) between the PCIB (CN2102) and JKDB (CN7902). If it is suspected that the PCIB (DWP1081) is defective, replace it. If it is suspected that the JKDB (DWZ1117) is defective, replace it. The external RS-422 device may be one that this unit cannot control.→ Refer to the Web site of Pioneer.
	LAN communication impossible	Check the connections. Check the settings. The LINK LED (yellow) corresponding to the LAN terminal does not light.	Connect the unit to a router, etc. with a straight cable. If NETWORK is set to OFF, set it to ON. If it is suspected that the MB (DXF1002) is defective, replace it.
	No operation of DVD-DRV1 DRV2 operates instead of DRV1	Check the connections. Press [FUNCTION] key then check the lower-right part of the screen to see if the connected drives are recognized. Check if the correct keys are pressed.	Check the connections between the MB and DVD_Drive 1, and between the ATX power supply and DVD_Drive 1. Reconnect the 4-pin power cable for the DVD-Drive 1. Reconnect or replace the IDE cable (DKP3648) between the MB and Drive 1. If it is suspected that the DVD Drive 1 (DVR-105-PLX) is defective, replace it. Reconnect or replace the 6-pin FFC (DDD1231) that connects the FLKB (CN502) and DRV1B (CN631).
	No operation of DVD-DRV2	Check the connections. Press [FUNCTION] key then check the lower-right part of the screen to see if the connected drives are recognized. Check if the correct keys are pressed.	Check the connections between the MB and DVD_Drive 2, and between the ATX power supply and DVD_Drive 2. Reconnect the 4-pin power cable for the DVD-Drive 2. Reconnect or replace the IDE cable (DKP3648) between the MB and Drive 2. If it is suspected that the DVD Drive 2 (DVR-105-PLX) is defective, replace it. Reconnect or replace the 6-pin FFC (DDD1231) that connects the KEYB (CN602) and DRV2B (CN641).
	Key input disabled, or malfunctioning	Check the connections: It is suspected that the key signals from another device remain to be input to FL UCOM (IC501) and that signals from the corresponding keyboard are not accepted. Check the key input from the remote control unit for service: As each segment on the FL display corresponds to a particular key on the remote control unit for service. If any segment on the FL display was already unlit, there had already been key input.	Check the connections among the FLKB, KEYB, DRV1B, and DRV2B: Reconnect or replace the 25-pin FFC (DDD1232) that connects the FLKB (CN503) and KEYB (CN601). Reconnect or replace the 25-pin FFC (DDD1232) that connects the FLKB (CN503) and KEYB (CN601). Reconnect or replace the 6-pin FFC (DDD1231) that connects the KEYB (CN602) and DRV2B (CN641). To enter Front-Panel-Button-Input Test mode, press the [ESC], [TEST], then [TV/LDP] keys, in that order. To quit Test mode, press the [ESC] key. Repair/replace the Assy corresponding to the inoperable key. FLKB (DWZ1118): STB, Disp, Func, Function operations (×5) KEYB (DWZ1108): Drv_Sel, Preview, Main operations (×8) DRV1B (DWZ1110): Drv1_Eject DRV2B (DWZ1111): Drv2_Eject Repair/replace the Assy.

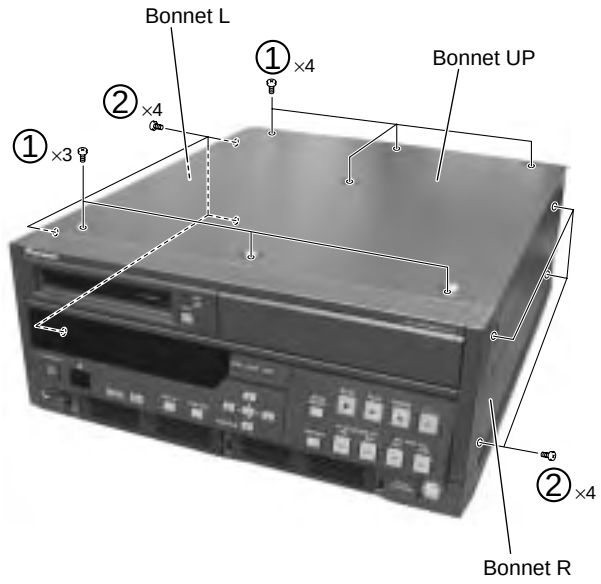
Operation	Symptom	Check Item	Measures to be taken
Misc.	Remote control unit not effective	Check the connections: Signals from the remote control unit may not be accepted because FL UCOM (IC501), which handles those signals, is occupied with other key signals that are kept input, although the remote control signals themselves are correctly processed in the FLKB.	Check the connections among the FLKB, KEYB, DRV1B, and DRV2B: Reconnect or replace the 25-pin FFC (DDD1232) that connects the FLKB (CN503) and KEYB (CN601). Reconnect or replace the 6-pin FFC (DDD1231) that connects the FLKB (CN502) and DRV1B (CN631). Reconnect or replace the 6-pin FFC (DDD1231) that connects the FLKB (CN602) and DRV2B (CN641).
		Check key input from the remote control unit for service: Key input from the remote control unit for service is not accepted. As each segment on the FL display corresponds to a particular key of the remote control unit for service. If any segment on the FL display was already unlit, there had already been key input.	To enter Front-Panel-Button-Input Test mode, press the [ESC], [TEST], then [TV/LDP] keys, in that order. To quit Test mode, press the [ESC] key. If it is suspected that the FLKB (DWZ1118) is defective, replace it. Repair/replace the Assy corresponding to the inoperable key. FLKB (DWZ1118): STB, Disp, Func, Function operation (x5) KEYB (DWZ1108): Drv_Sel, Preview, Main operation (x8) DRV1B (DWZ1110): Drv1_Eject DRV2B (DWZ1111): Drv2_Eject Repair/replace the Assy.
	All or part of the FL display is dark, or no FL display	Check the connections.	Check the connections between the PWRB and FLKB. Reconnect or replace the 20-pin cable (DKP3637) between the PWRB and FLKB.
		Check the display on the FL display, using the remote control unit for service.	To enter LED/FL Test mode, press the [ESC], [TEST], then [P.RUN] keys, in that order. To quit Test mode, press the [ESC] key. Check the FLKB (DWZ1118) or PWRB (DWZ1106) if all or part of the FL display is dark.
		Check the power supply for the FL display.	If the power supply from the PWRB (DWZ1106) is insufficient, replace the board. IC301 : -23.4V IC401 : -26.8V IC451 : -31.2V
		Misc.	The FL (DAW1019) on the FLKB (DWZ1118) is at the end of its life. Replace the FLKB board.
Installation	Installation not completed	Check the settings and connections.	Check the connections between the MB and HDD, MB and DVD_Drive 1, and between the MB and DVD_Drive 2: The HDD (VXF1015) must be connected to Master IDE_Primary. The DVD Drive 1 (DVR-105-PLX) must be connected to Master IDE_Secondary. The DVD Drive 2 (DVR-105-PLX) must be connected to Slave IDE_Secondary.
		"DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER" is displayed on the VGA screen.	Reinstall the OS. After replacement of the HDD, reinstall the OS.
		"!!!!!The root file system has been recovered!!!!!!!" is displayed in the log file.	If the same message was recorded many times, reinstall the OS.
Parts	Inoperable CPU cooler	Check connections.	Check the connections between the MB and CPU_FAN, and among the ATX power supply, PWRB, and MB. Reconnect the connector for the CPU cooler.
		No power supply to the CPU cooler	Reconnect the 20-pin cable of the ATX power supply (DXF1001), or replace the ATX power supply. Reconnect or replace the 20-pin cable (DKP3657) between the MB and PWRB (CN4).
		The CPU cooler is defective.	Replace the CPU cooler.
	Inoperable fans	Check connections.	Check the connections between the PWRB and the two fans in the front section and one fan in the rear section: Reconnect or replace the 2-pin relay cable (DKP3650) that connects the PWRB (CN9) and the fan at the rear section. Reconnect the 2-pin cable that connects the PWRB (CN10) and Fan 1 at the front section, or replace the fan (AXM7014). Reconnect the 2-pin cable that connects the PWRB (CN11) and Fan 2 at the front section, or replace the fan (AXM7014).
		The FAN_DET LED (D24) on the PWRB remains unlit.	If it is suspected that the fan (AXM7014) is defective, replace it. If it is suspected that the PWRB (DWZ1106) is defective, replace it.
	The unit will not start even after MB replacement	Check connections.	Check the connections among the ATX power supply, PWRB, MB and FLKB. Check the connections between the MB and HDD.
		"CMOS checksum error-Defaults loaded" is displayed on the VGA screen.	If the BIOS data check fails, press the F1 key then reload the BIOS values.
		Check the date and time: At startup, press the [DEL] key to check the date and time on the BIOS screen (standard CMOS features). (The range of recognition at the APL level is from 2002.01.01 to 2037.12.31.)	Set the date and time according to the current Greenwich mean time.

7.1.16 DISASSEMBLY

Note: When disassembling, be careful not to injure yourself with a burr, etc. Place the unit on a flat, level surface to perform servicing.

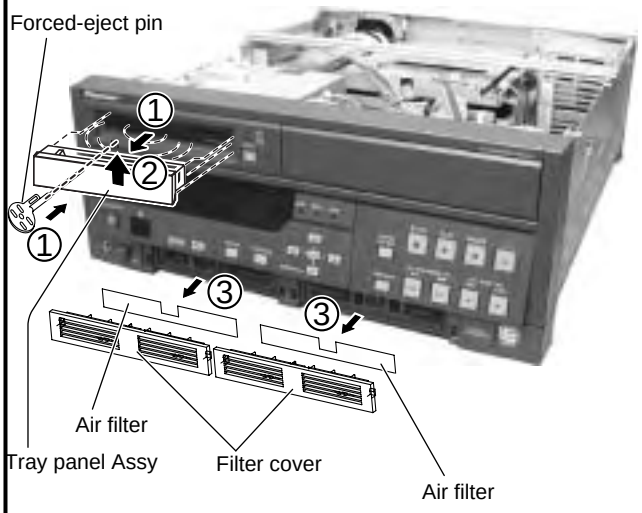
1 Bonnet UP, L and R

① Remove the Bonnet UP by removing the seven screws.
② Remove the Bonnet L and R by removing the eight screws.

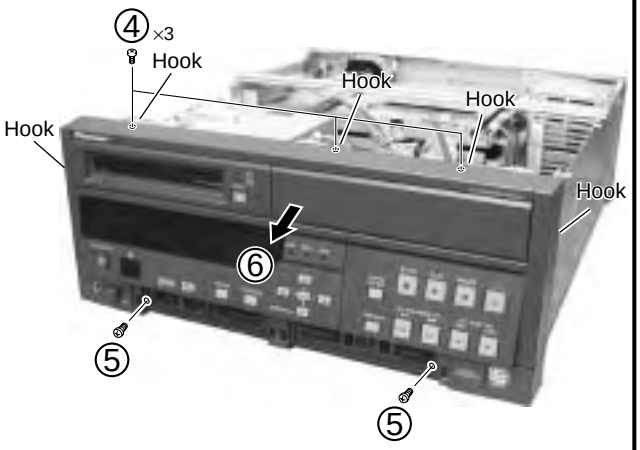


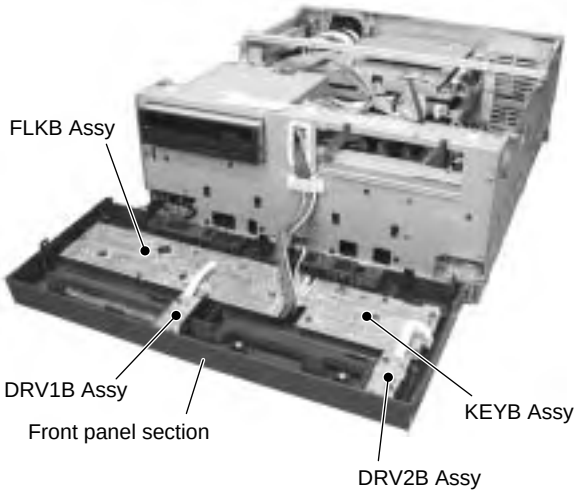
2 Front Panel Section

① Using the forced-eject pin, pull out the tray.
② Remove the Tray panel Assy then return the tray to its original position.
③ Remove the Filter cover and Air filter.



④ Remove the three screws.
⑤ Remove the two screws.
⑥ Remove the front panel section.
(First, unhook the five hooks for front panel fixing.)





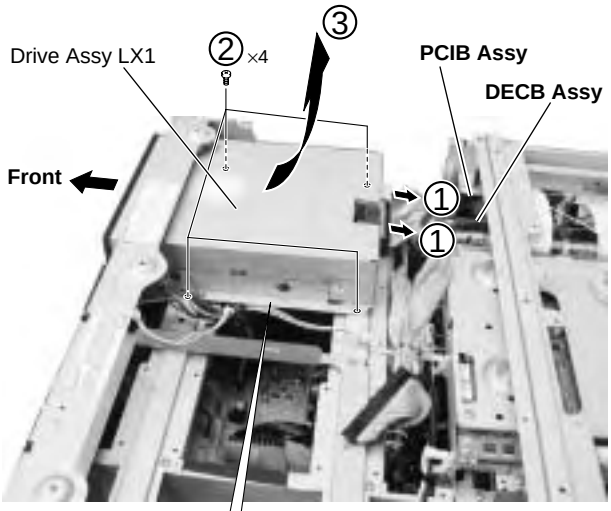
3 Drive Assy LX1(DRIVE 1 side)

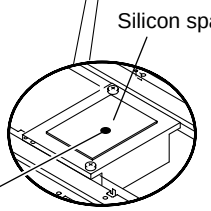
① Disconnect the two connectors.

② Remove the four screws.

③ Remove the Drive Assy LX1.

Note: When removing the Drive Assy LX1, be careful of the edges of the DECB Assy and PCIB Assy.





Note: When replacing the drive, check to see if Silicon spacer A is damaged. If it is, replace it.

4 Drive Assy (How to clen the lens)

① Using the forced-eject pin, pull out the tray.

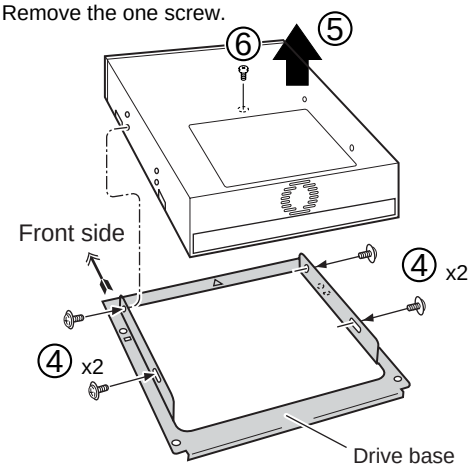
② Remove the Tray panel Assy then return the tray to its original position.

③ Remove the Drive Assy. (Refer to 3 Drive Assy LX1.)

④ Remove the four screws.

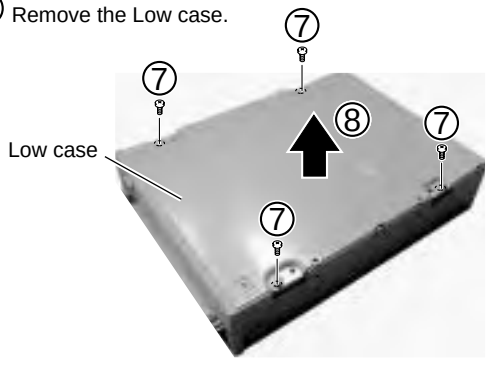
⑤ Remove the Drive Assy.

⑥ Remove the one screw.

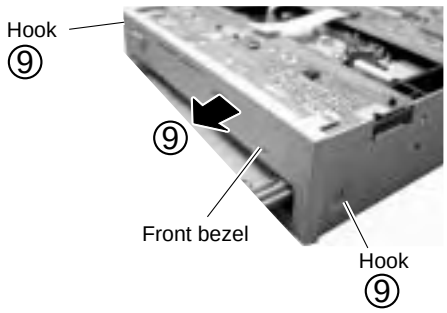


⑦ Remove the four screws.

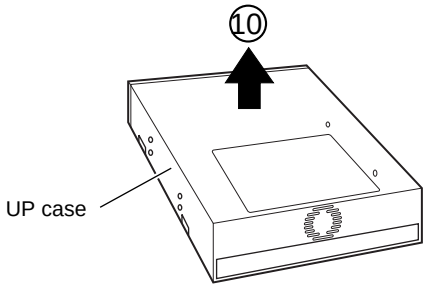
⑧ Remove the Low case.



⑨ Press the hooks on the left and right and remove the front bezel.

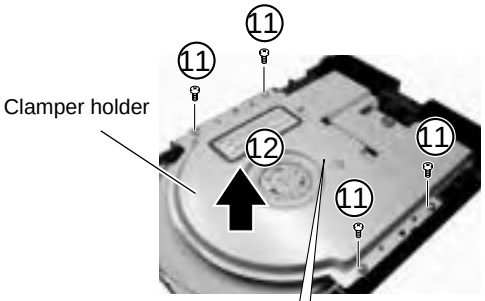


⑩ Remove the UP case.

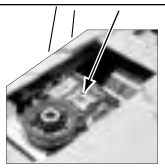


⑪ Remove the four screws.

⑫ Remove the Clamper holder.



Cleaning liquid : GEM1004
Cleaning paper : GED-008



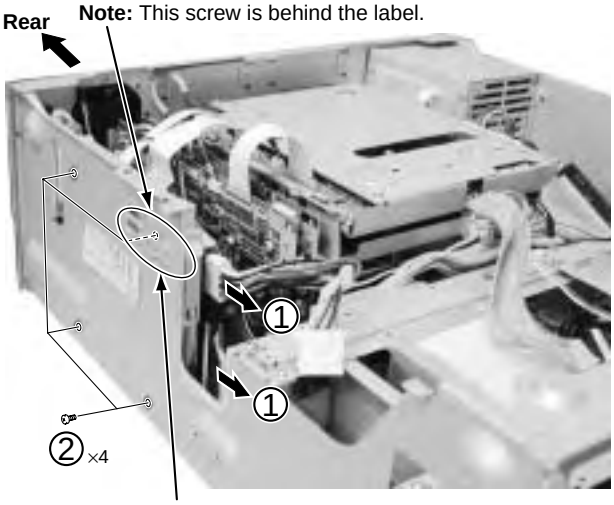
Do NOT look into the lens directly from the near. Laser light may injure your eyes.

5 HDD Assy Section

Note: For details on handling the HDD, see "7.1.10 Cautions on Handling the HDD."

① Disconnect the two connectors.

② Remove the four screws.



Note: When the HDD is removed for repair/replacement, after reassembling, be sure to attach a new sealing label.

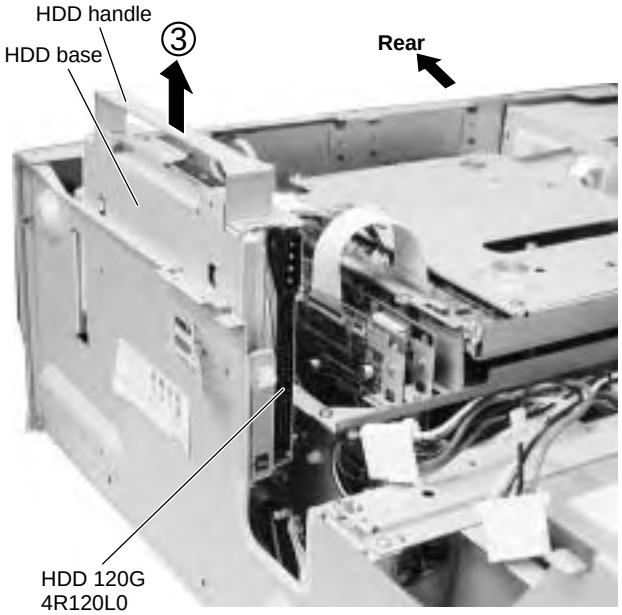
Name	Factory shipping	For Service
Label	BAX1217	BAX1238

Factory shipping
Character printing color: Black

For Service
Character printing color: orange

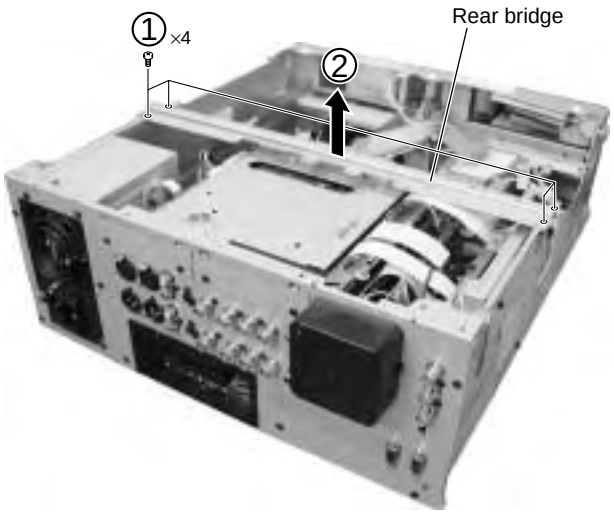
③ Remove the HDD Assy section by pulling the HDD handle.

Note: When removing the HDD Assy, be careful of the edges of the HDD base and the HDD handle.

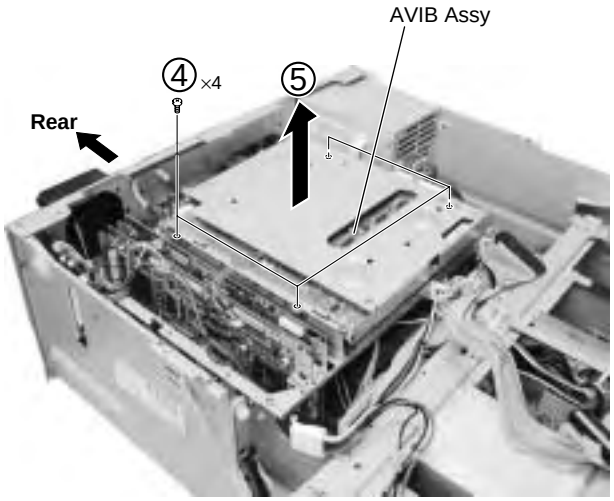


6 AVIB Assy

① Remove the four screws.
② Remove the Rear bridge.



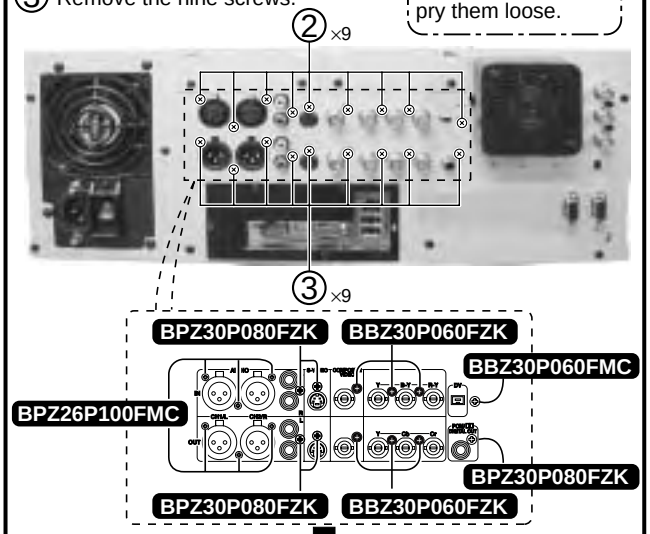
③ Remove the connectors which connected to the AVIB Assy.
④ Remove the four screws.
⑤ Remove the AVIB Assy, keeping the AVI shield and AVI base attached.



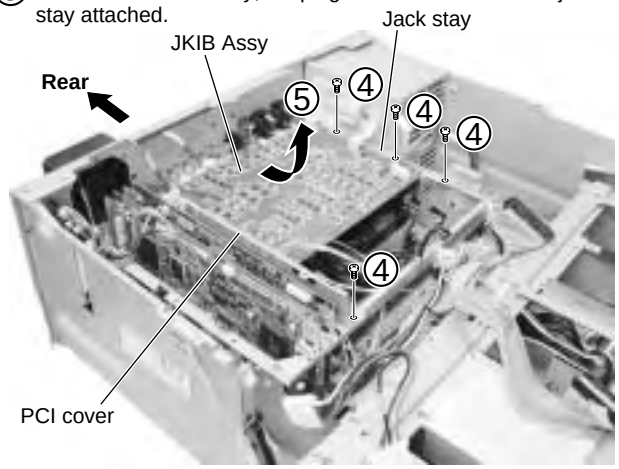
7 JKIB Assy and JKOB Assy

① Remove the connectors connected to the PCB Assys.
② Remove the nine screws.
③ Remove the nine screws.

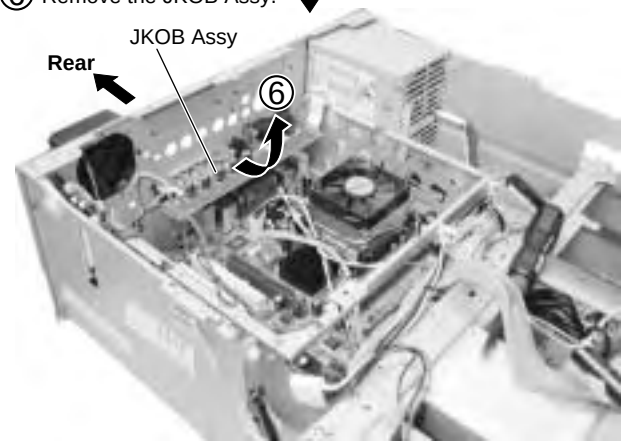
Use a medium-sized slot screwdriver to pry them loose.



④ Remove the four screws.
⑤ Remove the JKIB Assy, keeping the PCI cover and the jack stay attached.

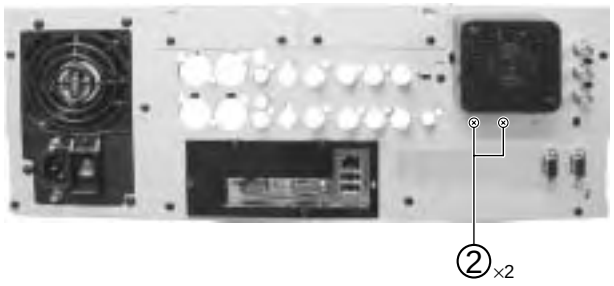


⑥ Remove the JKOB Assy.

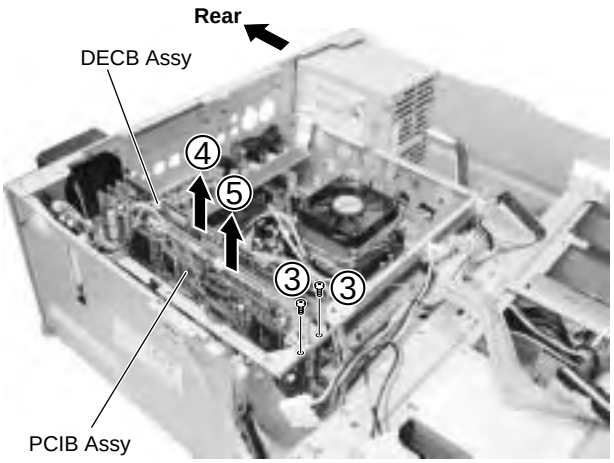


8 DECB Assy and PCIB Assy (PCI slot)

① Remove the connectors which connected to the PCB Assy.
② Remove the two screws.



③ Remove the two screws.
④ Pull out the DECB Assy from the PCI slot.
⑤ Pull out the PCIB Assy from the PCI slot.



Notes on removing:

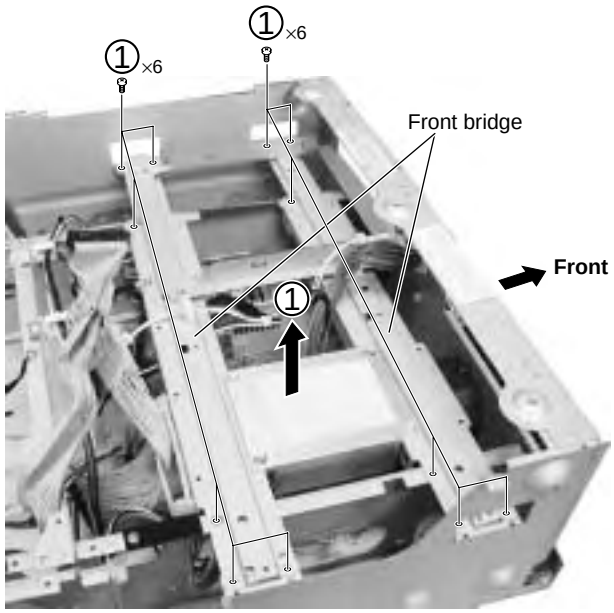
- After removing the DECB and PCIB Assys, be careful not to touch the edges of the PCI card.
- If the edges of the PCI card are dirty, clean the edges by IPA before reassembling.
- Make sure that dust does not become attached within the PCI slot on the MOTHER BOARD Assy.

Note on reinstallation of the application:

After replacing the DECB and PCIB Assys, or after replacing the built-in flash ROM, be sure to reinstall the application and update the firmware.

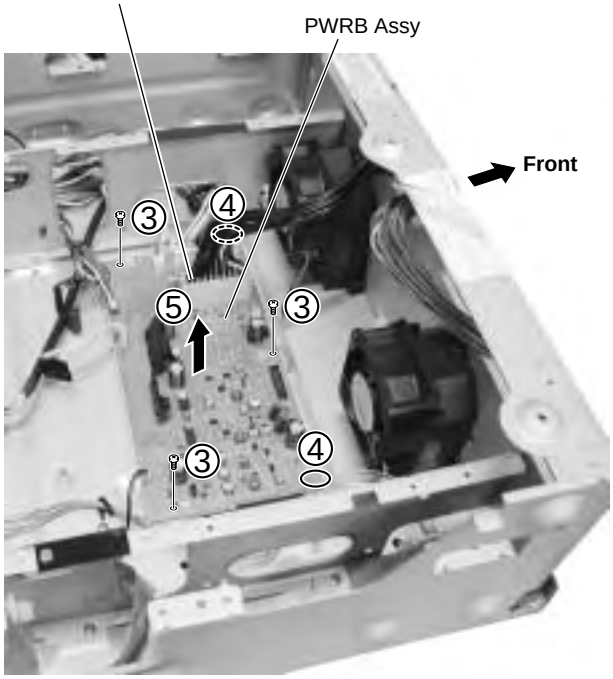
9 PWRB Assy

① Remove the two Front bridges by removing the twelve screws.



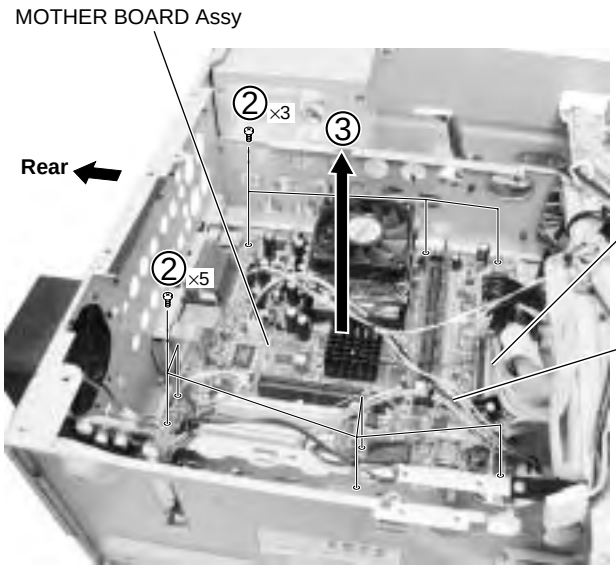
② Remove the connectors which connected to the PWRB Assy.
③ Remove the three screws.
④ Unhook the Card edge spacer.
⑤ Remove the PWRB Assy.

Note: Be careful, because the 20-pin Connector Assy is firmly attached.



10 MOTHER BOARD Assy

① Remove the connectors which connected to the MOTHER BOARD Assy.
② Remove the eight screws.
③ Remove the MOTHER BOARD Assy.



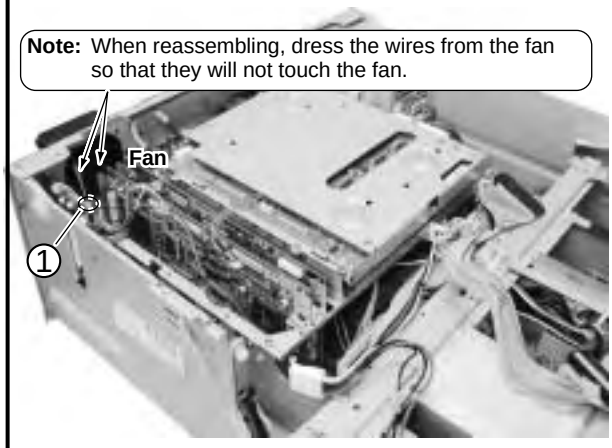
Note:
Because the IDE cable (40 pins) is fragile, care must be taken not to damage the cable with the edges when removing the MOTHER BOARD Assy.
(When dressing the IDE cable, bend the cable to 45 degrees at the joint of the connector and the cable.)

Note when dressing the cables:
When attaching the Connector Assy (4p) from the MOTHER BOARD Assy on the center stay with the holder, care must be taken so that nothing will touch the sharp edges of the center stay.

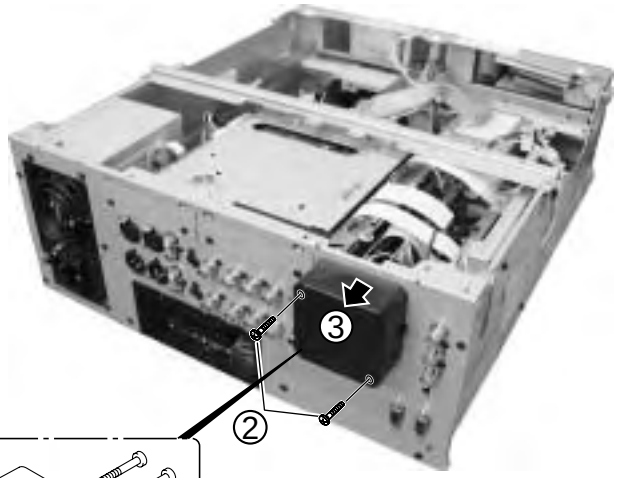
11 Rear Fan

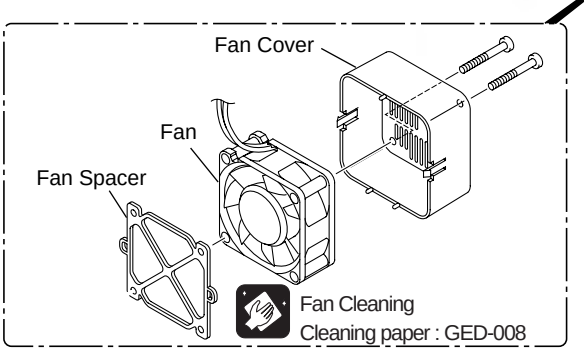
① Remove the 2P connector from the fan.

Note: When reassembling, dress the wires from the fan so that they will not touch the fan.



② Remove the two screws.
③ Remove the Fan Cover, Fan and Fan Spacer.

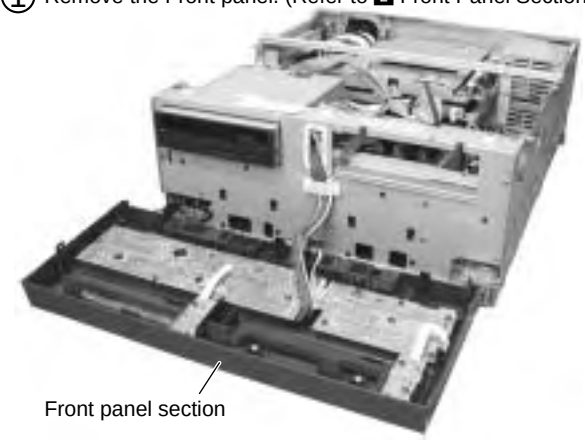




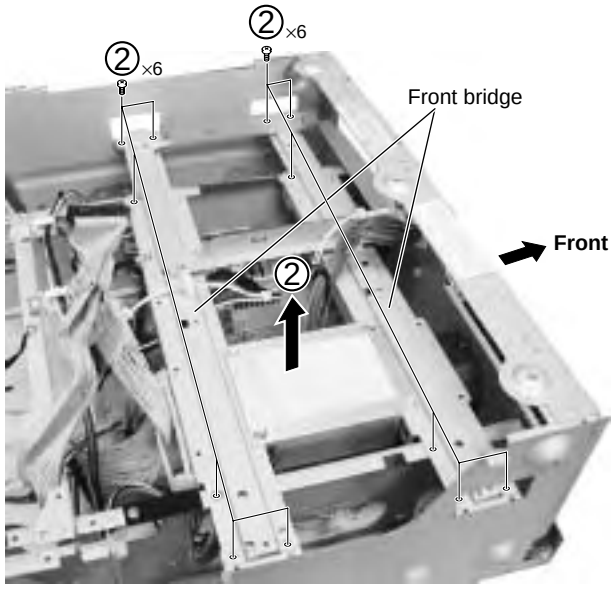
Note when replacing the fan:
Be careful handling the fan, because even a light shock to it may result in noise during operation.

12 Front Fan

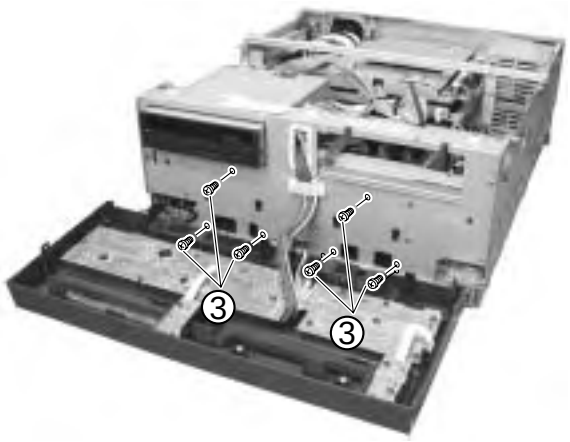
① Remove the Front panel. (Refer to 2 Front Panel Section.)



② Remove the two Front bridges by removing the twelve screws.

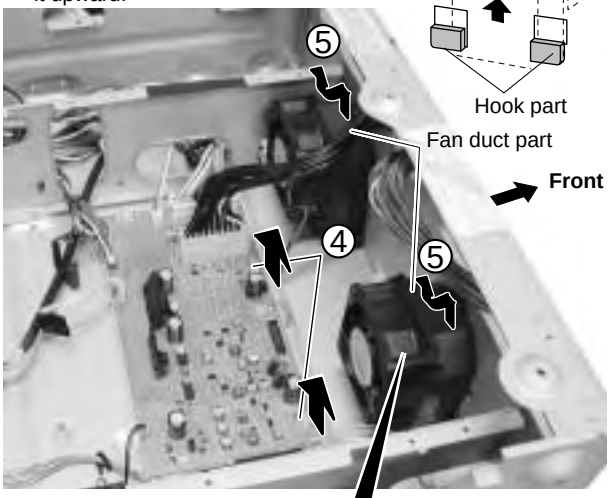


③ Remove the six screws. (L: three screws, R: three screws)

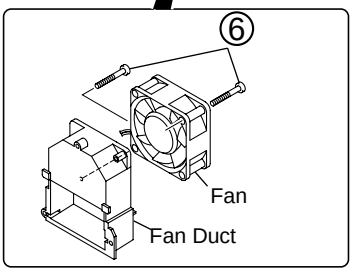


④ Remove the wires from the Fan.

⑤ Remove the Fan Duct block by sliding it upward.

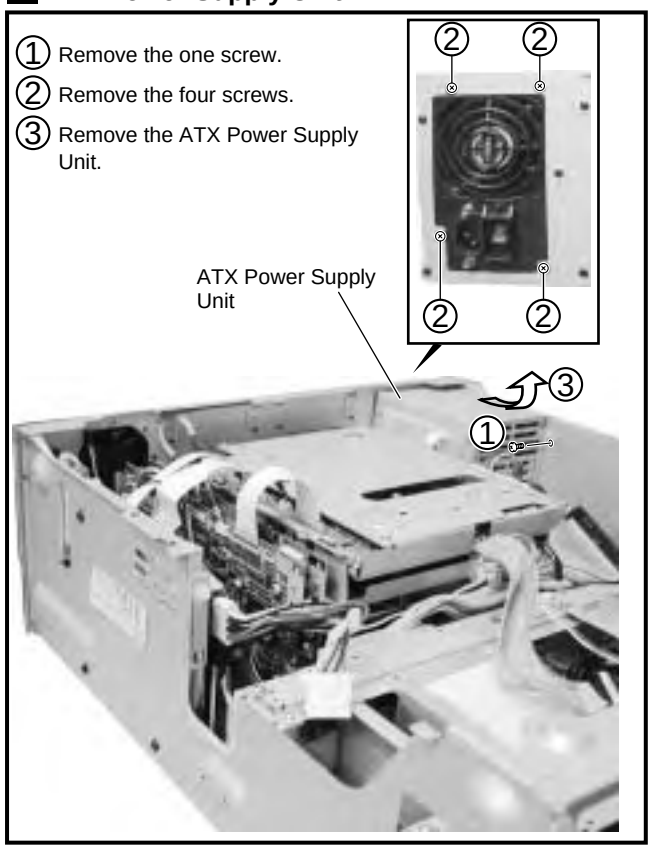


⑥ Remove the two screws.

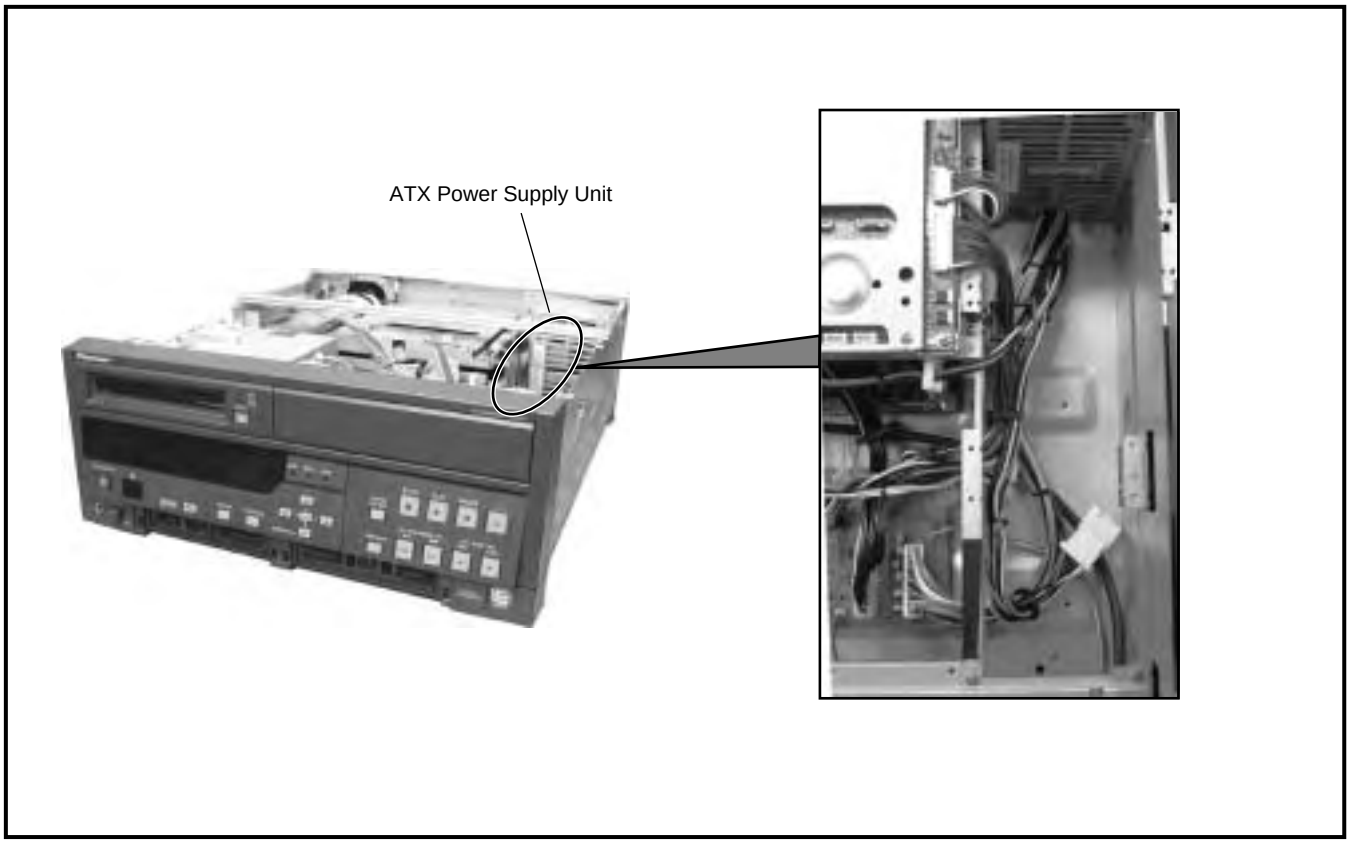


Note when replacing the fan:
Be careful handling the fan, because even a light shock to it may result in noise during operation.

13 ATX Power Supply Unit



The processing method of each wire rod (ATX Power Supply Unit: Power supply cable)

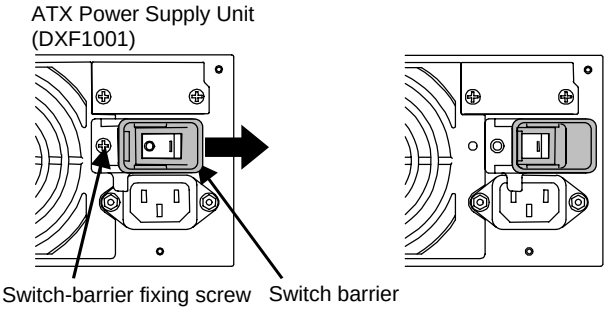


How to replace the fan in the ATX Power Supply unit

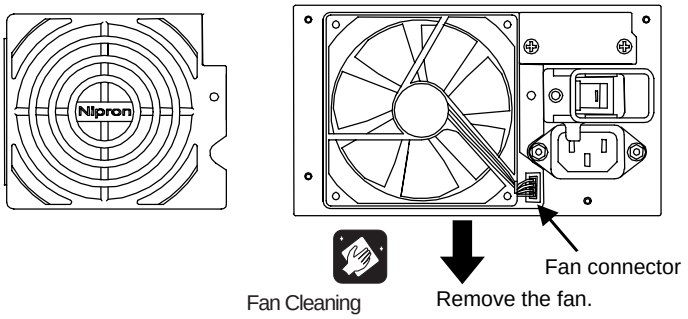
● Removing the fan

① Remove the switch-barrier fixing screw on the ATX Power Supply unit (DXF1001) then slide the switch barrier, as indicated in the figure.

Note:
Be sure to set the POWER switch to OFF and disconnect the AC power cord from the AC outlet before starting this step.



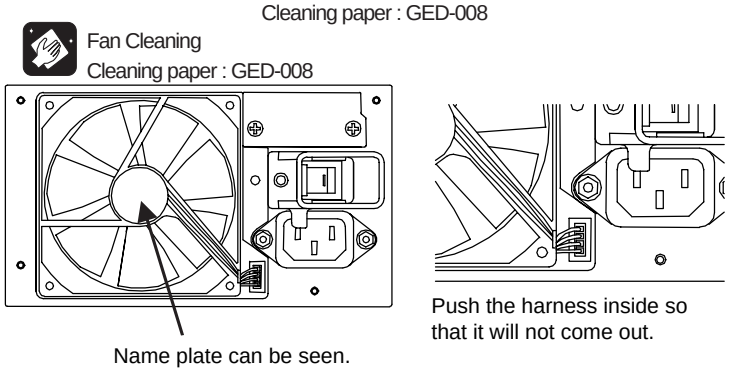
② Remove the fan guard, then remove the fan and disconnect the harness from the fan connector.



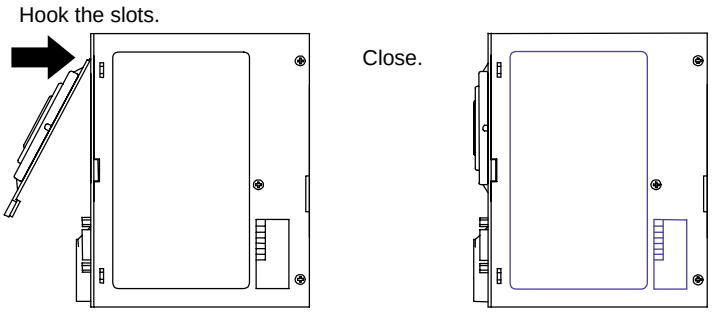
● Attaching the fan

① Connect the harness to the fan connector and install the fan into the panel. Push the harness inside.

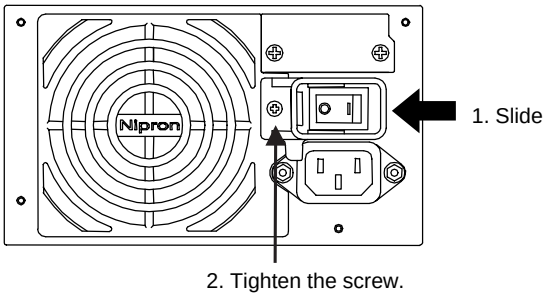
Notes:
- Place the fan so that the name plate of the fan can be seen from the front.
- Use the Fan Unit (DZM1001) dedicated to the ATX Power Supply unit (DXF1001).



② Attach the fan guard.



③ Slide the switch barrier and tighten the screw.

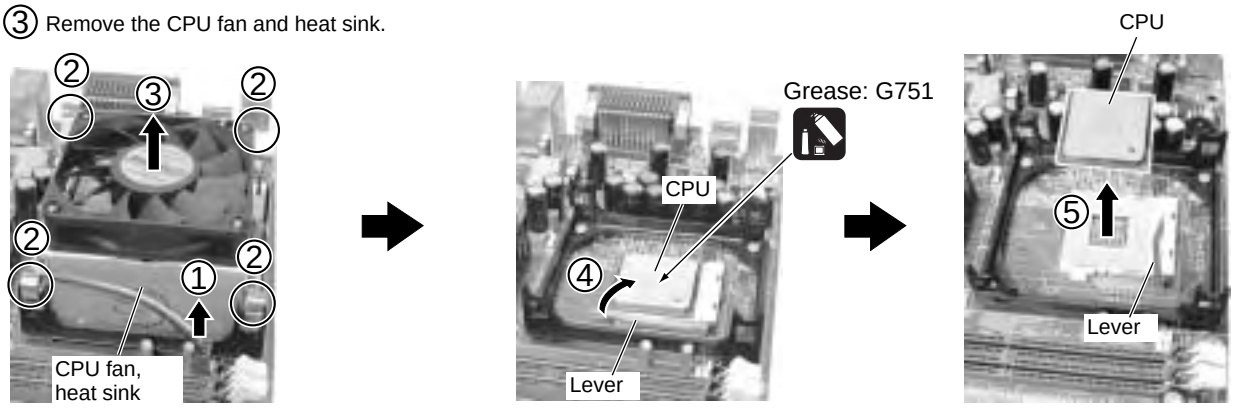


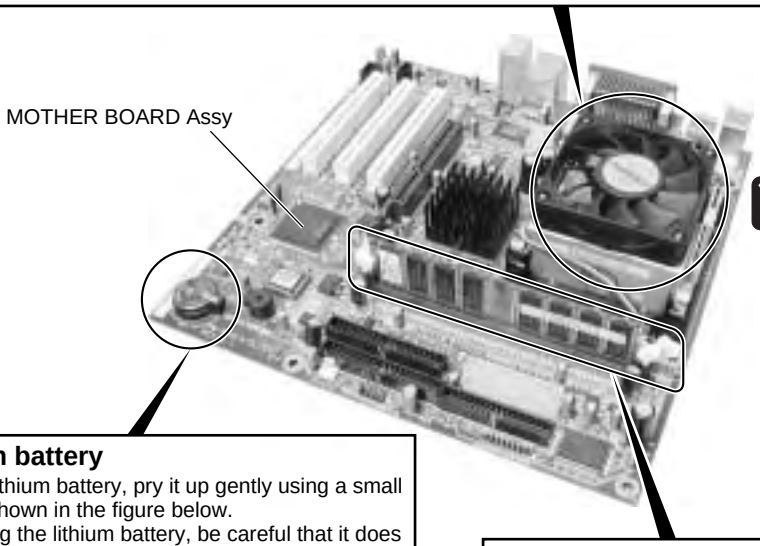
About the parts on the MOTHER BOARD Assy

On replacement of the CPU

Before reinstalling the CPU, apply the thermal compound, referring to "Notes on using the thermal compound," on the next page.

① Disconnect the cable from the connector.
② Unhook.
③ Remove the CPU fan and heat sink.
④ Lift upon the lever.
⑤ Remove the CPU.





Fan Cleaning
Cleaning paper : GED-008

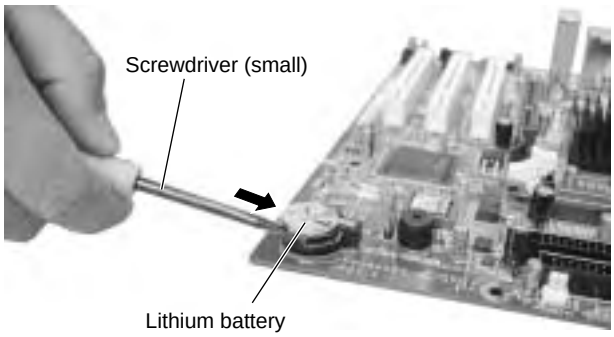
On the lithium battery

When removing the lithium battery, pry it up gently using a small slot screwdriver, as shown in the figure below.

Note: When removing the lithium battery, be careful that it does not touch other parts.

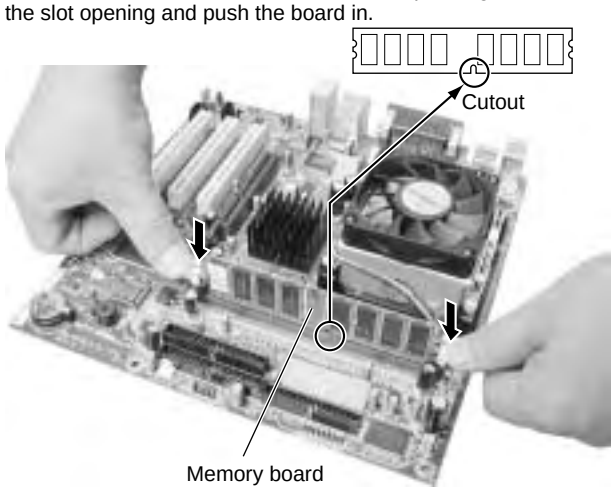
Lithium battery: 3.0 V CR2032
Panasonic: CR2032
Sony: CR2032
Toshiba: CR2032
Maxell: CR2032

Note: Before reinstalling the lithium battery, check its voltage, because it may have become discharged. (The cutoff voltage for the lithium battery is defined to be 2.5 V.)



On replacement and expansion of the memory board

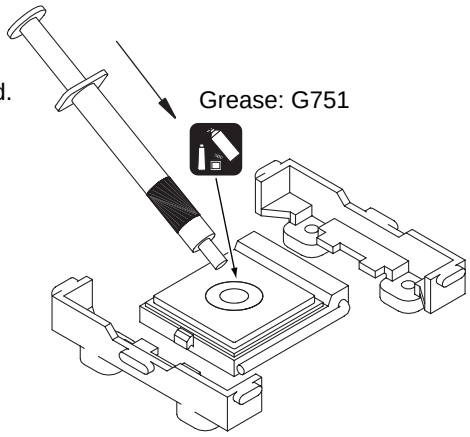
To remove the memory board, unhook the hooks on the both sides by pressing on them. When reattaching, align the indentation at bottom center with the corresponding notch at the slot opening and push the board in.



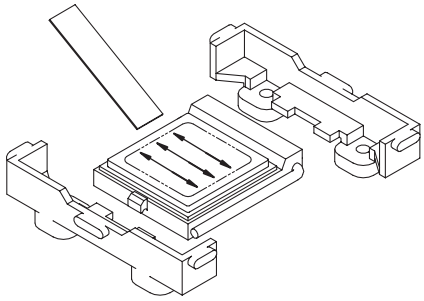
Notes on using the thermal compound

1. Before applying the thermal compound (grease), clean the surfaces of the CPU and heat sink.
2. There is about 0.5 gram of thermal compound. Apply it.

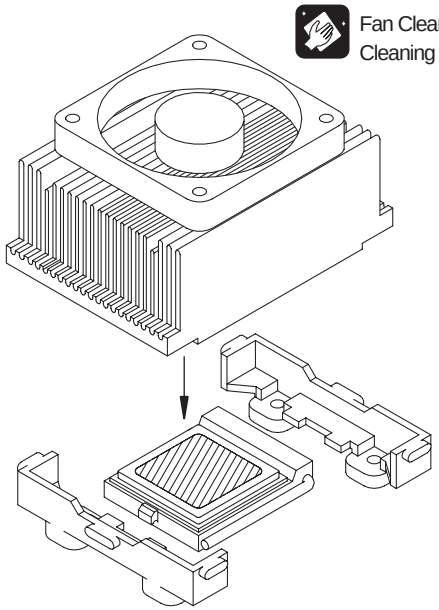
Grease: Shin-Etsu Chemical Co., Ltd.
Model nimber: G751
Appearance: Gray grease
Penetration (worked): 242
Specific gravity 23ºC: 2.50
Thermal conductivity: 4.5 W/m • ºC
Volume resistivity: 0.008 T Ω • m



3. Using the supplied spatula, spread the applied thermal compound thinly.



4. Wipe away excess thermal compound from the sides with a piece of cloth.
5. Securely attach the heat sink.



■ Air Filter Replacement Instructions

1. Confirm that the unit (PRV-LX1) is in the standby condition (STANDBY/ON in-dicator lights orange).

- If the unit is not in the STANDBY condition, stop any current operation and then press the STANDBY/ON switch to set the unit to the STANDBY condition.

2. Set the rear panel power switch to OFF, then disconnect the power plug from its power outlet .

3. To change the desired filter [left (drive 1) or right (drive 2)], slide the corre-sponding filter cover down (see NOTE 1) and pull toward the front to remove from the unit.

NOTE 1:
The distance which the filter cover will slide isonly about 6 -7 mm (about 1/4").
Do not attempt to slide the cover down fartherthan its natural limit. Take care when removingthe filter cover to avoid breakage.

4. Grasp the air filter with fingertips and pull out.

5. Install the new filter (attached to these Instructions).

- Insert the new filter so that the 4 cut-away por-tions align with the four ribs on the air intake.
  When installing a new filter, do not bend or fold the filter material.

6. Align the three hooks on the filter cover with the corresponding holes on the air intakes, and press in.

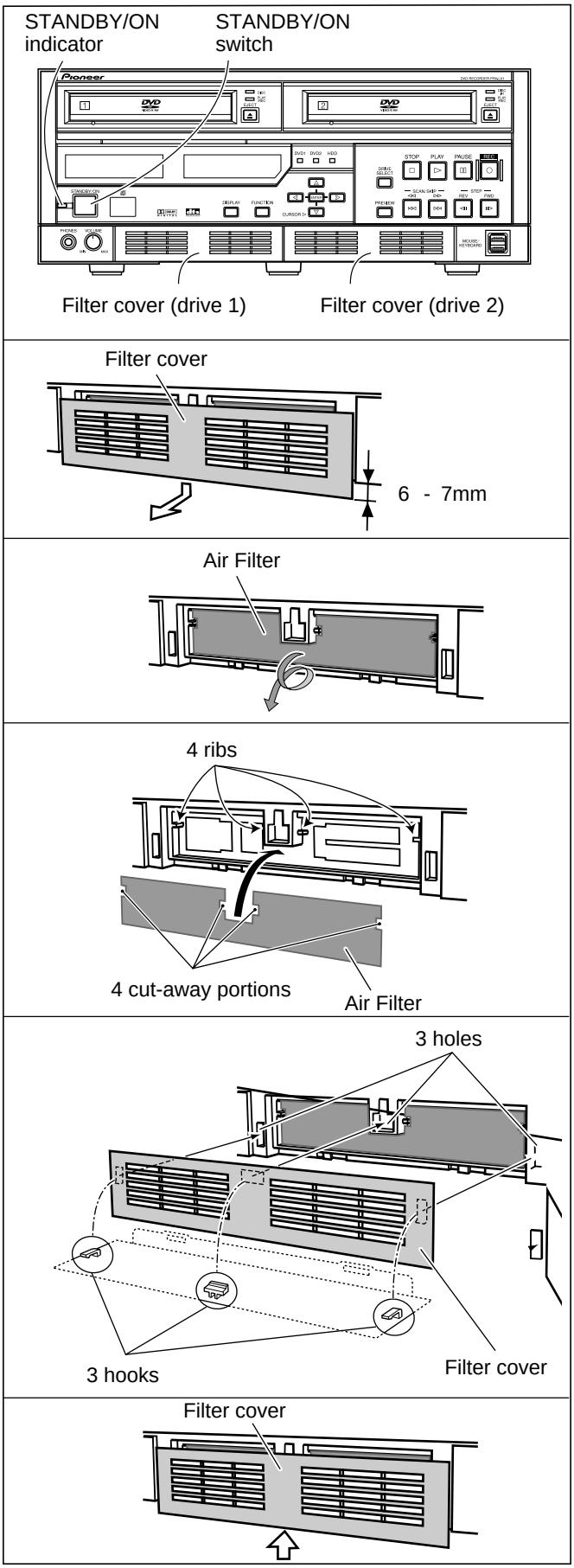
- Take care not to damage the hooks when reattaching the cover.

7. Slide the filter cover upward, and con-firm that the three hooks either fasten se-curely with a "click," or until you feel light resistance.

- If the filter cover is attached unevenly, the air col-lection and filtering efficacy will be lost, resulting in possible malfunction. As a result, be sure the sides of the filter are aligned securely in a straight and even orientation.

- When reattaching the air filter cover, take precau-tions not to allow the air filter to slip away from the air intake. If you attempt to replace the filter cover when the air filter is detached or protruding from the air intake, the unit may be damaged, so be sure the air filter is in its correct position when attempting to replace the cover. If you notice the air filter detached from or protruding from the air intake, do not use the unit in that condition, but go back to step 4 and reposition the filter before continuing.

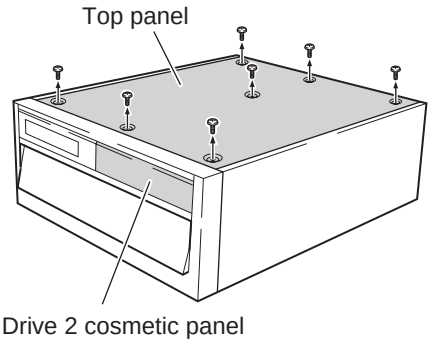
This completes the replacement procedure.



DV-R/RW WRITER UNIT. (Option) INSTALLATION

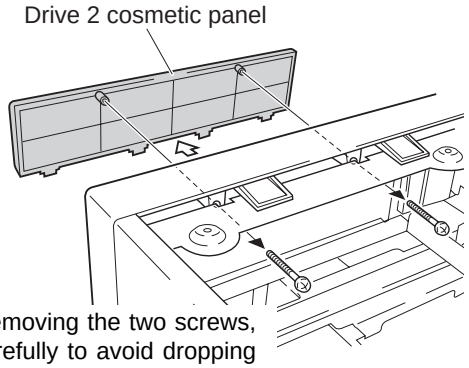
1. Remove PRV-LX1's top panel.

- Remove the top panel's 7 screws,then the top panel itself.



2. Remove the drive 2 cosmetic panel.

- To prevent the cosmetic panel from dropping, hold it in place while removing the two panel installation screws (the two screws will be used to install the drive 2 frame in step 3).

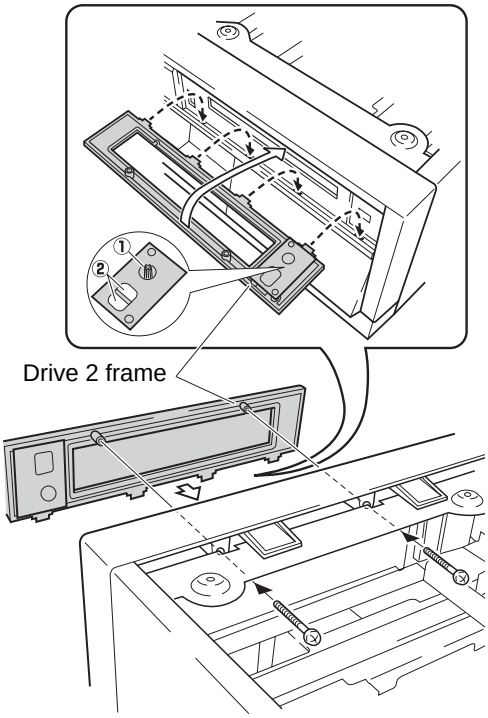


* When removing the two screws, work carefully to avoid dropping the screws inside the unit.

3. Install the accessory drive 2 frame.

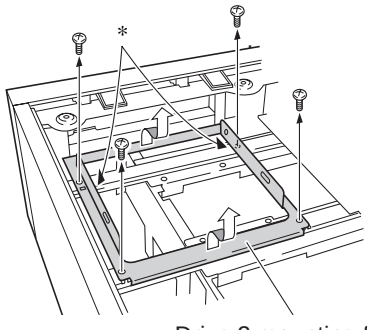
- Insert the tabs of the accessory drive 2 frame into the square holes (4) beneath the drive 2 opening on the front panel of the PRV-LX1, then press the frame into the opening. While holding the drive 2 frame carefully to prevent it from dropping, use the two screws (those removed in previous step 2) to secure the drive 2 frame in place.

NOTE ① . Do not hold or press against the cross-ribs.
NOTE ② . Do not touch the lens area.



4. Remove the drive 2 mounting fixture.

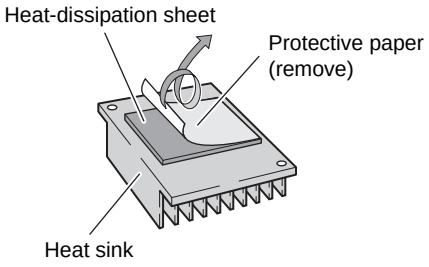
- Remove the four mounting screws and take off the drive 2 mounting fixture (the screws will be used in step 8 to reinstall the mounting fixture).



5. Remove the protective paper from the head dissipation sheet.

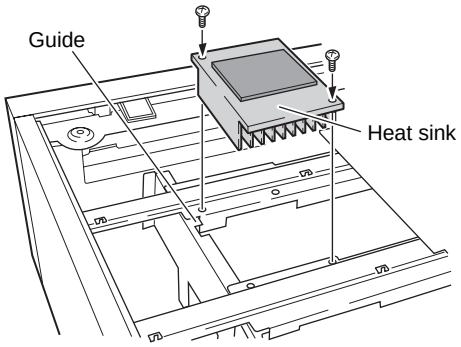
- Remove the protective paper from the accessory heat sink's heatdissipation sheet.

NOTE:
If the heat-dissipation sheet is applied without removing the protective paper, necessary heat dissipation effects will not be produced, leading to possible damage or malfunctions.



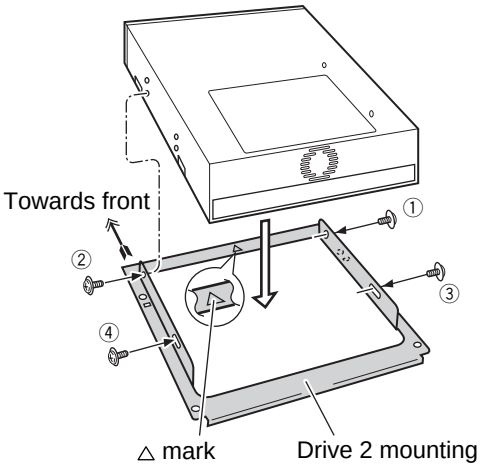
6. Install the heat sink.

With the fins toward the front, align the accessory heat sink with the guide, then use the 2 accessory screws (without collars) to fasten into place.



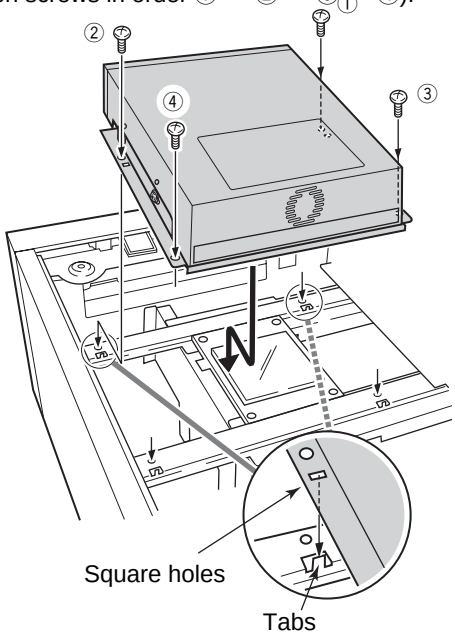
7. Fasten the drive 2 mounting fixture to the DVD-R / RW unit.

- Attach the drive 2 mounting fixture to the DVD-R/RW unit so that the Δ mark on the fixture is oriented toward the front.
- Fasten the fixture in place by using the four accessory flange screws (black) and tightening in the order ① → ② → ③ → ④.



8. Once the mounting fixture has been fastened to the DVD-R/RW unit, install the DVD-R/RW unit together with its mounting fixture to the DVD recorder PRV-LX1.

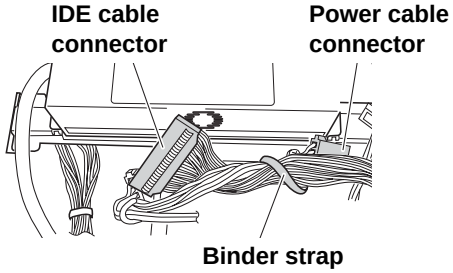
Align the two square holes on the drive 2 mounting fixture with the tabs on the PRV-LX1, then use the 4 screws removed in step 4 to fasten the drive in place (fasten screws in order ① → ② → ③ → ④).



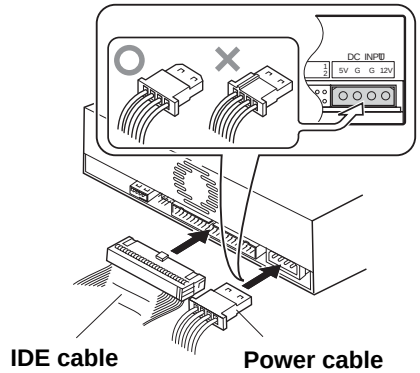
9. Attach the IDE cable and power cable.

- Remove the IDE cable and power cable from the cable binder.

NOTE:
Beware of all surrounding sharp edges when connecting and arranging cables.

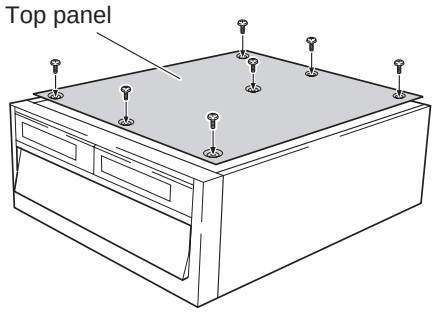


- Align the connectors correctly and connect securely.



10. Reinstall the top panel of the PRV-LX1.

• Use the 7 screws removed in step1 to reinstall the top panel.



Note: Before attaching the upper panel, make sure that the IDE cables between DVD Drives 1 and 2 and the connectors on the motherboard of the unit are firmly connected (see Step 9).

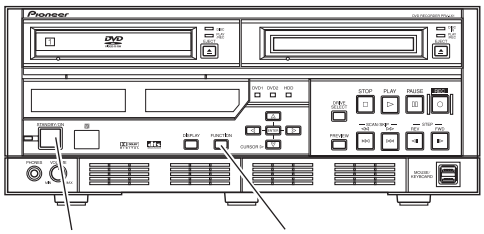
11. Confirm proper operation.

① Connect the PRV-LX1's power plug to a power outlet, and turn on the power switch (on rear panel of main unit). Then press the front-panel's STANDBY/ON button to turn on the power.

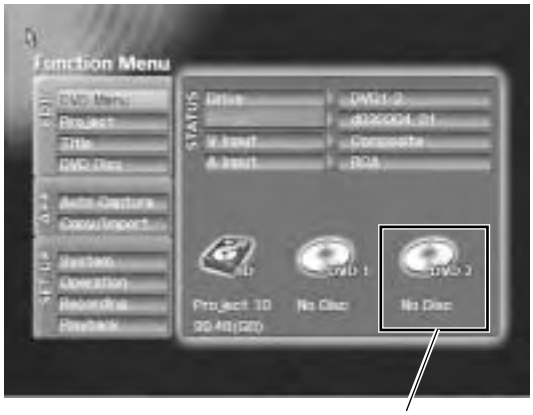
② Wait until the main unit recognizes the newly added DVD-R/RW unit.

③ When the PRV-LX1 enters idling status, press the FUNCTION button on the front panel.

④ The function menu will appear on the TV monitor; confirm that the "DVD2" indicator is displayed on the screen (see accompanying image).



Function menu



12. Install tray panel 2 on the drive 2 disc table.

① Press the DRIVE SELECT button to select DVD2. Press the DRIVE SELECT button several times until the DVD2 indicator lights.

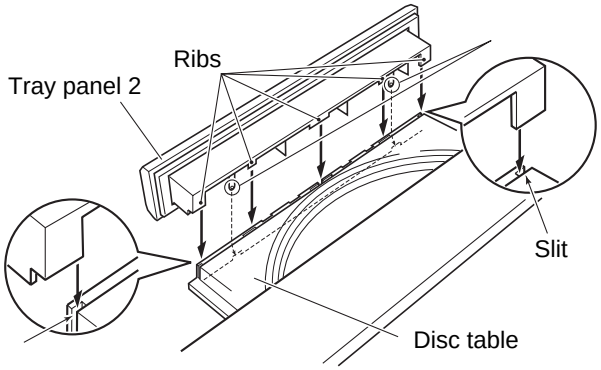
② Press the drive 2 EJECT button. The DVD2 disc table will emerge.

③ Insert the ribs of the accessory tray panel 2 into the grooves along the front edge of the disc table that emerged in step 2 . Then press down until the two hooks engage securely as shown.

NOTE:
When installing tray panel 2, take care not to press the disc table in the closing direction, since the automatic disc loading mechanism will cause the disc table to be pulled back in. If you accidentally press the disc table so that it is pulled back in, allow it to close naturally without touching it, then press the drive 2 EJECT button once again to open the disc table.

NEVER turn off the power during this operation or attempt to pull the disc table out, since the main unit (PRV-LX1) and this unit (PRA-DW11) may be damaged, and internal data may be erased.

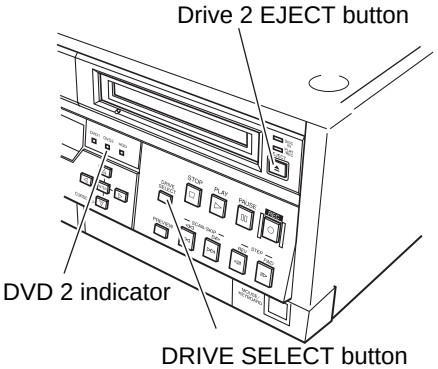
④ When the tray panel 2 is installed, press the drive 2 EJECT button to close the DVD2 disc table.



Press the main unit's front panel STANDBY/ON button and wait until the unit enters the standby mode.

Once the main unit is in the standby mode, set the unit's main power switch (on rear panel) to OFF, then disconnect the power cord from its power outlet.

NOTE:
Do not leave the power to the unit turned on when tray panel 2 is not installed (see step 12 for installation instructions). If tray panel 2 is not installed, dust may be pulled into the unit more easily, leading to malfunctions in recording and playback.

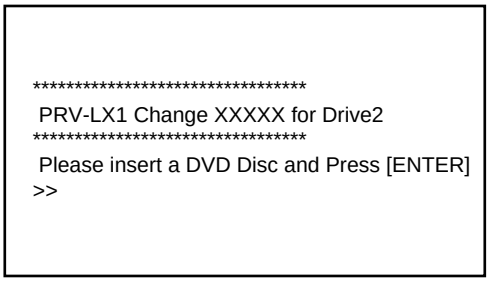


7.1.17 Region Setting of the DVD/RW Writer Unit (optional)

The factory-preset destination for the optional drive (PRA-DW11) is North America.
When installing the PRA-DW11 to the PRV-LX1 for other destinations, the following setting is required.

① After installing the PRA-DW11 in the PRV-LX1, start the PRV-LX1.

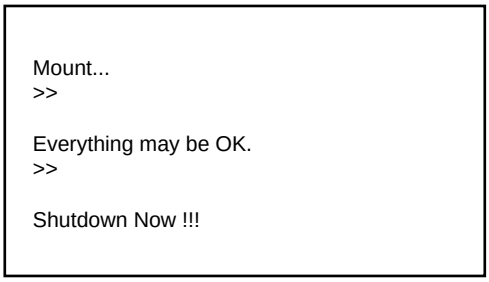
② The tray for DVD2 opens, and the following messages appear on the monitor screen and the FL display on the front panel.



Indication on the monitor screen

Indication on the FL display

③ Load a commercially available title disc with region code 2 into the tray for DVD2 and hold the [ENTER] button on the front panel pressed until the tray closes.



Indication on the monitor screen

④ The PRV-LX1 is automatically shut down. When the PRV-LX1 enters Standby mode, press the [STANDBY/ON] button on the front panel to restart the PRV-LX1.

⑤ Press the [DRIVE SELECT] button on the front panel and set the target drive to DVD2 (the DVD2 LED of the target drive on the front panel lights). Press the [PLAY] button and check that playback from the DVD2 drive starts.
(If a disc with region code 2 can be played back normally, the settings have been made correctly.)

7.2 IC INFORMATION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● **List of IC**

PE5392A9, XC2S50-5PQ208C, HD6417709AF100B, XC2S100-5PQ208C, HD6417709AF100B, M65776AFP

■ PE5392A9 (FLKB ASSY : IC501)

• FL Microcomputer

● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	SIMUKE2	I	Destination setting S1
2	OEM	I	Not used (default H)
3	AN17	–	Not used
4	AVSS	–	GND
5	DRV1_OPCL	I	Disc eject signal of DRIVE1 High: when S631 is pressed, Low: normally
6	DRV2_OPCL	I	Disc eject signal of DRIVE2 High: when S631 is pressed, Low: normally
7	AVREF1	I	AVref 5V
8	PCRXD	I	Receive a signal from the Mother Board
9	PCTXD	O	Transmit a signal to the Mother Board
10	P72	–	Not used
11	FD1SI	I	Not used (Data receiving from the FL driver (IC502))
12	FD1SO	O	Data transmission to the FL driver (IC502)
13	FD1SCK	O	Clock output to the FL driver (IC502)
14	FD1STB	O	Strobe output to the FL driver (IC502)
15	FD2STB	O	Strobe output to the FL driver (IC503)
16	FD2SI	I	Not used (Data receiving from the FL driver (IC503))
17	FD2SO	O	Data transmission to the FL driver (IC503)
18	FD2SCK	O	Clock output to the FL driver (IC503)
19	PS_ON_I#	I	Capture of a PS_ON signal from the Mother Board
20	PWR_OK_I	I	Capture of a PWR_OK signal from the ATX PSU
21	CHECKER	I	Assy check mode L: Assy check mode, H: Normal mode
22	AUTO_PON	I	Automatic start setting at AC ON H: Start at AC ON, L: STB at AC ON
23	FAN_DET	I	Not used (FAN detection)
24	P45	–	Not used
25	P46	–	Not used
26	P47	–	Not used
27	SIOT	I	Not used (Data I/O for temperature sensor)
28	SCT	O	Not used (Clock output for temperature sensor)
29	CST	O	Not used (Chip select for temperature sensor)
30	K_PREVIEW	I	PREVIEW key H: Normally, L: PUSH
31	K_PLAY	I	PLAY key H: Normally, L: PUSH
32	K_REC	I	REC key H: Normally, L: PUSH
33	VSS1	–	Vss1
34	K_PAUSE	I	PAUSE key H: Normally, L: PUSH
35	K_STOP	I	STOP key H: Normally, L: PUSH
36	K_DRV_SEL	I	DRIVE SELECT key H: Normally, L: PUSH
37	LD_PLAY	O	PLAY LED control H: Normally (Extinguish), L: Light
38	DRV1_DISC	O	Disc existence of DRIVE1 H: No DISC (Extinguish), L: DISC exists (Light)
39	LD_PAUSE	O	PAUSE LED control H: Normally (Extinguish), L: Light
40	DRV2_LD_ACCESS (GREEN)	O	Access LED (GREEN) control of DRIVE2 H: Normally (Extinguish), L: Light

No.	Pin Name	I/O	Pin Function
41	LD_SB	O	STANDBY/ON LED control H: Normally (Extinguish), L: Light
42	LD_ON	O	STANDBY/ON LED control H: Normally (Extinguish), L: Light
43	LD_REC	O	REC LED control H: Normally (Extinguish), L: Light
44	SIF	I	SIF (for flash writing)
45	SOF	O	SOF (for flash writing)
46	CKF	I	CKF (for flash writing)
47	LD_DRV1	O	DRIVE 1 LED control of drive select LED H: Normally (Extinguish), L: Light
48	LD_DRV2	O	DRIVE 2 LED control of drive select LED H: Normally (Extinguish), L: Light
49	LD_HDD	O	HDD LED control of drive select LED H: Normally (Extinguish), L: Light
50	DRV1_LD_ACCESS (GREEN)	O	Access LED (GREEN) control of DRIVE 1 H: Normally (Extinguish), L: Light
51	DRV1_LD_ACCESS (RED)	O	Access LED (RED) control of DRIVE 1 H: Normally (Extinguish), L: Light
52	LD_STOP	O	STOP LED control H: Normally (Extinguish), L: Light
53	DRV2_DISC	O	Disc existence of DRIVE 2: No DISC (Extinguish), L: DISC exists (Light)
54	DRV2_LD_ACCESS (RED)	O	Access LED (RED) control of DRIVE 2 H: Normally (Extinguish), L: Light
55	PON	I	STANDBY/ON key (S509) check H: PUSH, L: Normally
56	RSTBTN	I	Not used
57	PS_ON_O#	O	Output the PS_ON signal which received from the Mother Board to the ATX power
58	PWR_SW#	O	Output a relay control signal for supply +5VSB to the Mother Board
59	RESET#	O	Reset output H: Normally, L: Reset
60	XRESET	I	For flash writing
61	IRIN	I	Remote control signal receive
62	FAN_CONT1	O	FAN control for the rear
63	FAN_CONT2	O	FAN control for the DRIVE 1
64	FAN_CONT3	O	FAN control for the DRIVE 2
65	PWR_SW2#	O	Power SW signal to the Mother Board H: Normally, L: PUSH
66	P05/INTP5	–	Not used
67	VSS0	–	Not used
68	VDD1	–	Power supply 5V
69	X2	–	Crystal connection pin for clock oscillation
70	X1	I	Crystal connection pin for clock oscillation (input)
71	VPP	–	Vpp (for flash writing)
72	XT2	–	Not used
73	XT1/P07	–	Not used
74	VDD0	I	Power supply 5V
75	AVREF0	I	AVref0 5V
76	UP,DOWN,LEFT,RIGHT	I	Analog input UP: 4.25V, DOWN: 2.8V, LEFT: 1.24V, RIGHT: 0V
77	REGION	I	Destination setting R
78	K_SCAN_STEP	I	Analog input SCAN/SKIP_FWD: 4.25V, SCAN/SKIP_REV: 2.8V, STEP_FWD: 1.24V, STEP_REV: 0V
79	ENTER,SETUP,DISPLAY	I	Analog input ENTER: 4.25V, FUNCTION: 2.8V, DISPLAY: 1.24V
80	SIMUKE1	I	Destination setting S0

■ XC2S50-5PQ208C (AVIB ASSY : IC5004)

• LTC Switch FPGA

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GNDDI	–	GND	46	DVREQ	I	DV control signal
2	TMS	–	TEST Pin	47	DVACK	O	DV control signal
3	27MWMK	O	27MHz clock for WMIC	48	DVFRM	I	DV control signal
4	LTC IN	I	Time code input	49	WAITDVX	I	DVXcel wait signal
5	B/XS	O	Component level switch "L"=BETA, "H"=SMPTE	50	M1	I	Mode setting (pull-up)
6	RESERVE	–	Resereved	51	GNDDI	–	GND
7	THSW	O	AV through output switch "L"=Non, "H"=THROU	52	M0	I	Mode setting (ground)
8	SCL	O	For I2C communication (not used)	53	V+3_3I	–	+3.3V
9	SDA.	O	For I2C communication (not used)	54	M2	I	Mode setting (pull-up)
10	VSEL1	O	Input video switching signal "L"=CVBS, "H"=S	55	N.C.	–	Not used
11	GNDDI	–	GND	56	N.C.	–	Not used
12	V+3_3I	–	+3.3V	57	TBCLK	O	Clock for DVXceL
13	V+2_5I	–	+2.5V	58	SDICKSEL	O	Clock selection at SDI input at SDI select: H
14	VSEL2	O	Input video switching signal "L"=CV/S, "H"=TCbCr	59	DVCSEL	I	PLL gain switch of DV input at DV input: L
15	G_ADD7	I	George656 video data	60	DVOEN	I	DV control signal
16	G_ADD6	I	George656 video data	61	XWAITV	O	DV control signal
17	G_ADD5	I	George656 video data	62	WAITDVSH	O	DV control signal
18	G_ADD4	I	George656 video data	63	LXRD	I	Host bus read signal
19	GNDDI	–	GND	64	GNDDI	–	GND
20	G_ADD3	I	George656 video data	65	V+3_3I	–	+3.3V
21	G_ADD2	I	George656 video data	66	V+2_5I	–	2.5V
22	G_ADD1	I	George656 video data	67	SEL27M	O	Not used
23	G_ADD0	I	George656 video data	68	AV1_LRCK	I	Decoder audio LR clock
24	G_NONSI	I	Nonstandard 656 flag	69	AV1_BCK	I	Decoder audio clock
25	GNDDI	–	GND	70	AV1_DAI	I	Decoder audio data
26	V+3_3I	–	+3.3V	71	SDI_CHSEL	O	SDI audio switch "L"=Ch3/4, "H"=Ch1/2
27	XSELXLR	O	Audio input switching signal "L"=RCA, "H"=XLR	72	GNDDI	–	GND
28	V+2_5I	–	+2.5V	73	AES_ERROR	I	Error signal of AES/EBU signal "L"= Error exists, "H"= no error
29	ADATI	I	ADC data	74	SDI_RST	I	System reset signal to DINB
30	BCKI	I	ADC block clock	75	SDI_LOCK	I	Lock ok signal to SDI audio "L"= Unlock, "H"= Lock
31	LRCKI	I	ADC LR clock	76	V+2_5I	–	+2.5V
32	GNDDI	–	GND	77	36MFPGA	I	36.864MHz clock for audio
33	FDATI	O	Multiplex audio data	78	V+3_3I	–	+3.3V
34	FBCKI	O	Multiplex audio clock	79	GNDDI	–	GND
35	FLRCKI	O	Multiplex audio LR clock	80	40MPLD	I	40MHz clock for configuration
36	RESERVE	–	Reserved	81	AV1_D7	I	Decoder 656 video data
37	MCIF_ACKZ	I	DV acknowledge signal	82	AV1_D6	I	Decoder 656 video data
38	V+2_5I	–	+2.5V	83	AV1_D5	I	Decoder 656 video data
39	V+3_3I	–	+3.3V	84	AV1_D4	–	Decoder 656 video data
40	GNDDI	–	GND	85	GNDDI	–	GND
41	MCIF_STRBZ	O	DV strobe signal	86	AV1_D3	I	Decoder 656 video data
42	GPIO3_WM0	I	DV control signal	87	AV1_D2	–	Decoder 656 video data
43	HSDIA_AV	I	DV control signal	88	AV1_D1	I	Decoder 656 video data
44	HSDIA_EN	O	DV control signal	89	AV1_D0	–	Decoder 656 video data
45	HSDIA_CLK	O	Clock for DV (LINK) IC	90	PCC1	I	Copy protection existence flag "H" = Copy protection exists

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	V+2_5I	–	+2.5V	136	SDO_LRCK	O	Audio LR clock for SDIOUT
92	V+3_3I	–	+3.3V	137	GNDDI	–	GND
93	GNDDI	–	GND	138	SDI_D0	I	656 video data for SDIIN
94	27MSDO	O	27kHz clock for SDI OUT	139	SDI_D1	I	656 video data for SDIIN
95	L_A0	I	Host address bus	140	LXWE0	I	Host bus read signal
96	L_A1	I	Host address bus	141	SDI_DAI	I	Audio data for SDIIN
97	L_A2	I	Host address bus	142	L_D2	I/O	CPU Data/configuration Data
98	L_A3	I	Host address bus	143	V+2_5I	–	+2.5V
99	L_A4	I	Host address bus	144	V+3_3I	–	+3.3V
100	L_A5	I	Host address bus	145	GNDI	–	GND
101	L_A6	I	Host address bus	146	L_D1	I/O	CPU Data/configuration Data
102	L_A7	I	Host address bus	147	SDI_D2	I	656 video data for SDIIN
103	GNDDI	–	GND	148	SDI_D3	I	656 video data for SDIIN
104	DONE	I	for configuration	149	SDI_D4	I	656 video data for SDIIN
105	V+3_3I	–	+3.3V	150	SDI_D5	I	656 video data for SDIIN
106	XPROGRAM	I	for configuration	151	SDI_D6	I	656 video data for SDIIN
107	XINT	I	for configuration	152	SDI_D7	I	656 video data for SDIIN
108	L_D0	I/O	CPU Data/configuration Data	153	L_D0	I/O	CPU Data/configuration Data
109	APLILIA_DATA	I	Audio data of APLILIA output	154	ENC OK	O	LED port for operation check
110	APLILIA_BCK	I	Audio clock of APLILIA output	155	CCLK	I	for configuration
111	APLILIA_LRCK	I	Audio clock of APLILIA output	156	V+3_3I	–	+3.3V
112	AES_VALID	I	SDI N/PAL distinction signal "L"=PAL, "H"=NTSC	157	TDO	–	Not used
113	SDI_VALID	I	Valid signal of SDI signal "L"= invalid "H"= valid	158	GNDDI	–	GND
114	DINB_EXIST	I	DINB mounting existence signal "L"= nothing, "H" = exists	159	TDI	–	Not used
115	L_D6	I/O	CPU Data/configuration Data	160	LXCS40	I	Chip select from the host
116	GNDDI	–	GND	161	LXCS40	I	Chip select from the host
117	V+3_3I	–	+3.3V	162	LXCS56	I	Chip select from the host
118	V+2_5I	–	+2.5V	163	SDI_BCK	I	Audio clock for SDIIN
119	L_D5	I/O	CPU Data/configuration Data	164	SDI_LRCK	I	Audio LR clock for SDIIN
120	SDO_D0	O	656 video data for SDIOUT	165	AESI_LRCK	I	AES/EBU audio LR clock input
121	SDO_D1	O	656 video data for SDIOUT	166	AESI_BCK	I	AES/EBU audio clock input
122	SDO_D2	O	656 video data for SDIOUT	167	AESI_DAI	I	AES/EBU audio data input
123	SDO_D3	O	656 video data for SDIOUT	168	F_ADD0	O	656 video data to VAIKILT
124	GNDDI	–	GND	169	GNDDI	–	GND
125	SDO_D4	O	656 video data for SDIOUT	170	V+3_3I	–	+3.3V
126	L_D4	I/O	CPU Data/configuration Data	171	V+2_5I	–	+2.5V
127	SDO_D5	O	656 video data for SDIOUT	172	F_ADD1	O	656 video data to VAIKILT
128	V+2_5I	–	+2.5V	173	F_ADD2	O	656 video data to VAIKILT
129	SDO_D6	O	656 video data for SDIOUT	174	F_ADD3	O	656 video data to VAIKILT
130	V+3_3I	–	+3.3V	175	F_ADD4	O	656 video data to VAIKILT
131	GNDDI	–	GND	176	F_ADD5	O	656 video data to VAIKILT
132	SDO_D7	O	656 video data for SDIOUT	177	GNDDI	–	GND
133	SDO_DAI	O	Audio data for SDIOUT	178	F_ADD6	O	656 video data to VAIKILT
134	SDO_BCK	O	Audio clock for SDIOUT	179	F_ADD7	O	656 video data to VAIKILT
135	L_D3	I/O	CPU Data/configuration Data	180	F_NONSI	O	Nonstandard 656 flag to VAIKILT

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	SDO_ENA	O	Digital output switching signal	195	DV_VAIKILTD7	I	656 video data of VAIKILT output
182	27MFPGA	I	27MHz clock for FPGA	196	V+2_5I	–	+2.5V
183	GNDDI	–	GND	197	V+3_3I	–	+3.3V
184	V+3_3I	–	+3.3V	198	GNDDI	–	GND
185	27MDEC	I	27MHz clock of AV1 output	199	WMKD0	O	656 video data for water mark
186	V+2_5I	–	+2.5V	200	WMKD1	O	656 video data for water mark
187	DV_VAIKILTD0	I	656 video data of VAIKILT output	201	WMKD2	O	656 video data for water mark
188	DV_VAIKILTD1	I	656 video data of VAIKILT output	202	WMKD3	O	656 video data for water mark
189	DV_VAIKILTD2	I	656 video data of VAIKILT output	203	WMKD4	O	656 video data for water mark (LED port for operation check)
190	GNDDI	–	GND	204	WMKD5	O	656 video data for water mark (LED port for operation check)
191	DV_VAIKILTD3	I	656 video data of VAIKILT output	205	WMKD6	O	656 video data for water mark (LED port for operation check)
192	DV_VAIKILTD4	I	656 video data of VAIKILT output	206	WMKD7	O	656 video data for water mark (LED port for operation check)
193	DV_VAIKILTD5	I	656 video data of VAIKILT output	207	TCK	–	Not used
194	DV_VAIKILTD6	I	656 video data of VAIKILT output	208	GNDI	–	Connect to +3.3V

HD6417709AF100B (PCIB ASSY : IC2405)

• MPU IC

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	MD1	I	CLK mode setting fixed to H	46	D5	I/O	Data bus
2	MD2	I	CLK mode setting fixed to H	47	VccQ	–	Core power supply (1.8V)
3	Vcc-RTC	–	Power supply for RTC (1.8V)	48	D4	I/O	Data bus
4	XTAL2	0	RTC output (32.768 kHz)	49	D3	I/O	Data bus
5	EXTAL2	I	RTC input (32.768 kHz)	50	D2	I/O	Data bus
6	Vss-RTC	–	Ground	51	D1	I/O	Data bus
7	NMI	I	NMI interruption (not used)	52	D0	I/O	Data bus
8	IREQ0	I	Not used	53	A0	O	Address bus
9	IREQ1	I	Not used	54	A1	O	Address bus
10	IREQ2	I	DVXCel interruption (L: active)	55	A2	O	Address bus
11	IREQ3	I	Audery (L: active)	56	A3	O	Address bus
12	IREQ4	I	Pcif (Xilinx) interruption (L: active)	57	VssQ	–	Ground
13	D31	I/O	Data bus	58	A4	O	Address bus
14	D30	I/O	Data bus	59	VccQ	–	Core power supply (1.8V)
15	D29	I/O	Data bus	60	A5	O	Address bus
16	D28	I/O	Data bus	61	A6	O	Address bus
17	D27	I/O	Data bus	62	A7	O	Address bus
18	D26	I/O	Data bus	63	A8	O	Address bus
19	VssQ	–	Ground	64	A9	O	Address bus
20	D25	I/O	Data bus	65	A10	O	Address bus
21	VccQ	–	Core power supply (1.8V)	66	A11	O	Address bus
22	D24	I/O	Data bus	67	A12	O	Address bus
23	D23	I/O	Data bus	68	A13	O	Address bus
24	D22	I/O	Data bus	69	VssQ	–	Ground
25	D21	I/O	Data bus	70	A14	O	Address bus
26	D20	I/O	Data bus	71	VccQ	–	Core power supply (1.8V)
27	Vss	–	Ground	72	A15	O	Address bus
28	D19	I/O	Data bus	73	A16	O	Address bus
29	Vcc	–	I/O power supply (3.3V)	74	A17	O	Address bus
30	D18	I/O	Data bus	75	A18	O	Address bus
31	D17	I/O	Data bus	76	A19	O	Address bus
32	D16	I/O	Data bus	77	A20	O	Address bus
33	VssQ	–	Ground	78	A21	O	Address bus
34	D15	I/O	Data bus	79	Vss	–	Ground
35	VccQ	–	Core power supply (1.8V)	80	A20	O	Address bus
36	D14	I/O	Data bus	81	Vcc	–	I/O power supply (3.3V)
37	D13	I/O	Data bus	82	A23	O	Address bus
38	D12	I/O	Data bus	83	VssQ	–	Ground
39	D11	I/O	Data bus	84	A24	O	Address bus
40	D10	I/O	Data bus	85	VccQ	–	Core power supply (1.8V)
41	D9	I/O	Data bus	86	A25	O	Address bus
42	D8	I/O	Data bus	87	BS	O	Starts bus cycle
43	D7	I/O	Data bus	88	RD	O	Read strobe
44	D6	I/O	Data bus	89	WE0	O	Write strobe
45	VssQ	–	Ground	90	WE1	O	Write strobe

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	WE2	O	Write strobe	136	TRST	I	For debugging
92	WE3	O	Write strobe	137	TMS	I	For debugging
93	RDWR	O	Read / Write	138	TDI	I	For debugging
94	AUDSYNC	O	For debugging	139	TCK	I	For debugging
95	VssQ	–	Ground	140	INTB	I	Slalom interruption (L: active)
96	CS0	O	Chip select 0	141	INTA	I	Not used
97	VccQ	–	Core power supply (1.8V)	142	INT9	I	Not used
98	CS2	O	Chip select 2	143	INT8	I	Slalom interruption (L: active)
99	CS3	O	Chip select 3	144	MD0	I	CLK mode setting fixed to H
100	CS4	O	Chip select 4	145	Vcc-PLL1	–	Power supply for PLL (1.8V)
101	CS5	O	Chip select 5	146	CAP1	–	Capacitor pin for PLL
102	CS6	O	Chip select 6	147	Vss-PLL1	–	Ground
103	DVOEN	O	DV REQ MASK	148	Vss-PLL2	–	Ground
104	XRSTAU	O	Reset for Audery	149	CAP2	–	Capacitor pin for PLL
105	CKE	O	CKE for SDRAM	150	Vcc-PLL2	–	Power supply for PLL (1.8V)
106	RAS3	O	RAS for SDRAM	151	AUDC	O	For debugging
107	N.C.	–	Not used	152	Vss	–	Ground
108	CASL	O	CAS for SDRAM	153	Vss	–	Ground
109	VssQ	–	Ground	154	Vcc	–	I/O power supply (3.3V)
110	XPHRST	O	Reset for 1394PHY	155	XTAL	O	CPU clock
111	VccQ	–	Core power supply (1.8V)	156	EXTAL	I	CPU clock
112	WMRST	O	Not used	157	DVCSEL	O	Control the output signal to LTC_SW (Xilinx) Dvexcel or ceLynx
113	LXPROGRAM	O	LTC_SW (Xilinx) configuration program signal	158	N.C.	–	Not used
114	DAC0	O	Slalom DMA ACK	159	N.C.	–	Not used
115	DAC1	O	Pcif(Xilinx)DMA ACK	160	IRQOUT	O	Interruption output
116	PPROGRAM	O	Pcif (Xilinx) configuration program signal	161	VssQ	–	Ground
117	DONE	I	PCIF (Xilinx) configuration termination signal	162	CKIO	I	System clock input (40MHz)
118	PINI	I/O	PCIF (Xilinx) configuration initial signal	163	VccQ	–	Core power supply (1.8V)
119	DRST	O	Dvxcel reset signal	164	TXD0	O	RS422 input TXD
120	TDO	O	For debugging	165	N.C.	–	Not used
121	BACK	O	Not used	166	TXD1	O	RS422 output TXD
122	BREQ	I	Not used	167	N.C.	–	Not used
123	WAIT	I	Wait signal	168	TXD2	O	RS232C TXD
124	RESET	I	Reset input	169	N.C.	–	Not used
125	N.C.	–	Not used	170	RTS2	O	RS232C RTS
126	N.C.	–	Not used	171	RXD0	I	RS422 input RXD
127	ASMD	I	For debugging	172	RXD1	I	RS422 output RXD
128	ASBR	O	For debugging	173	Vss	–	Ground
129	WDVS	I	Wait input from LTC_SW (Xilinx) Dvexcel	174	RXD2	I	RS232C RXD
130	AUD3	O	For debugging	175	Vcc	–	I/O power supply (3.3V)
131	AUD2	O	For debugging	176	CTS2	I	RS232C CTS
132	Vss	–	Ground	177	LXINIT	I/O	LTC_SW (Xilinx) configuration initial signal
133	AUD1	O	For debugging	178	LDONE	I	LTC_SW (Xilinx) configuration termination signal
134	Vcc	–	SH I/O power supply (3.3V)	179	INT5	I	Vaikilt interruption input (L: active)
135	AUD0	O	For debugging	180	INT4	I	Vaikilt interruption input (L: active)

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	VssQ	–	Ground	195	MD3	I	Bus width setting of area 0 fixed to H
182	PTD3	O	Status LED	196	MD4	I	Bus width setting of area 0 fixed to H
183	VccQ	–	Core power supply (1.8V)	197	MD5	I	Bus width setting of area 0 fixed to L
184	PTD2	O	Status LED	198	Avss	–	Ground
185	INT3	I	Celynx interruption input (L: active)	199	DBP0	I	Audery DBP0
186	INT2	I	Not used	200	DBP1	I	Audery DBP1
187	INT1	I	Not used	201	DBP2	I	Audery DBP2
188	INT0	I	George interruption input (L: active)	202	DBP3	I	Audery DBP3
189	PTD1	O	Status LED	203	SRER	I	SRC lock signal
190	PTD0	O	Status LED	204	WBSY	–	Not used
191	DREQ0	I	DMA REQ for Slalom	205	Avcc	–	Power supply for analog (3.3V)
192	DREQ1	I	DMA REQ for Pcif (Xilinx)	206	PTL6	–	Not used
193	RESET	I	Reset input	207	PTL7	–	Not used
194	CA	I	Chip active	208	Avss	–	Ground

■ XC2S100-5PQ208C (PCIB ASSY : IC2309)

• PCIF XILINX

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GND	–	Ground	46	AD06	I/O	PCI address/data
2	N.C.	–	Not used	47	AD05	I/O	PCI address/data
3	AD28	I/O	PCI address/data	48	AD04	I/O	PCI address/data
4	AD27	I/O	PCI address/data	49	AD03	I/O	PCI address/data
5	AD26	I/O	PCI address/data	50	M1	I	Configuration mode switch fixed to H
6	AD25	I/O	PCI address/data	51	GND	–	Ground
7	AD24	I/O	PCI address/data	52	M0	I	Configuration mode switch fixed to L
8	CBE3	I/O	PCI bus command / byte enable	53	VccO	–	I/O power supply (3.3V)
9	IDSE	I	PCI initialization device select	54	M2	I	Configuration mode switch fixed to H
10	AD23	I/O	PCI address/data	55	N.C.	–	Not used
11	GND	–	Ground	56	N.C.	–	Not used
12	VccO	–	I/O power supply (3.3V)	57	AD02	I/O	PCI address/data
13	Vccint	–	Core power supply (2.5V)	58	AD01	I/O	PCI address/data
14	AD22	I/O	PCI address/data	59	AD00	I/O	PCI address/data
15	AD21	I/O	PCI address/data	60	N.C.	–	Not used
16	AD20	I/O	PCI address/data	61	XBSOUT	O	Signal for LTC_SW (Xilinx) configuration
17	AD19	I/O	PCI address/data	62	WE0	I	SH write strobe
18	AD18	I/O	PCI address/data	63	N.C.	–	Not used
19	GND	–	Ground	64	GND	–	Ground
20	AD17	I/O	PCI address/data	65	VccO	–	I/O power supply (3.3V)
21	AD16	I/O	PCI address/data	66	Vccint	–	Core power supply (2.5V)
22	CBE2	I/O	PCI bus command / byte enable	67	BREQ	–	Not used
23	FRM	I/O	PCI frame	68	BACK	–	Not used
24	IRDY	I/O	PCI initiator ready	69	CASL	I	CAS for SH SDRAM
25	GND	–	Ground	70	RAS3	I	RAS for SH SDRAM
26	VccO	–	I/O power supply (3.3V)	71	CKE	I	CKE for SH SDRAM
27	TRDY	I/O	PCI target ready	72	GND	–	Ground
28	Vccint	–	Core power supply (2.5V)	73	CS3	I	SH chip select 3
29	DEV	I/O	PCI device select	74	RDWR	I	SH read/write
30	PAR	I/O	PCI parity	75	WE3	I	SH write strobe
31	CBE1	I/O	PCI bus command / byte enable	76	Vccint	–	Core power supply (2.5V)
32	GND	–	Ground	77	I.GCK1	–	Not used
33	AD15	I/O	PCI address/data	78	Vcc0	I	SH write strobe
34	AD14	I/O	PCI address/data	79	GND	–	Ground
35	AD13	I/O	PCI address/data	80	I.GCK0	I	SH system clock (40 MHz)
36	AD12	I/O	PCI address/data	81	WE2	I	SH write strobe
37	AD11	I/O	PCI address/data	82	WE1	I	SH write strobe
38	Vccint	–	Core power supply (2.5V)	83	DRQ1	0	DMA REQ for SH
39	VccO	–	I/O power supply (3.3V)	84	DAC1	I	DMA ACK for SH
40	GND	–	Ground	85	GND	–	Ground
41	AD10	I/O	PCI address/data	86	A15	I	SH address bus
42	AD09	I/O	PCI address/data	87	A14	I	SH address bus
43	AD08	I/O	PCI address/data	88	A13	I	SH address bus
44	CBE0	I/O	PCI bus command / byte enable	89	A12	I	SH address bus
45	AD07	I/O	PCI address/data	90	A11	I	SH address bus

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	Vccint	–	Core power supply (2.5V)	136	D17	I/O	SH data bus
92	VccO	–	I/O power supply (3.3V)	137	GND	–	Ground
93	GND	–	Ground	138	D16	I/O	SH data bus
94	A10	I	SH address bus	139	D15	I/O	SH data bus
95	A09	I	SH address bus	140	D14	I/O	SH data bus
96	A08	I	SH address bus	141	D13	I/O	SH data bus
97	A07	I	SH address bus	142	D02	I/O	SH data bus
98	A06	I	SH address bus	143	Vccint	–	Core power supply (2.5V)
99	A05	I	SH address bus	144	VccO	–	I/O power supply (3.3V)
100	A04	I	SH address bus	145	GND	–	Ground
101	A03	I	SH address bus	146	D01	I/O	SH data bus
102	A02	I	SH address bus	147	D12	I/O	SH data bus
103	GND	–	Ground	148	D11	I/O	SH data bus
104	DONE	O	PCIF (Xilinx) configuration termination signal	149	D10	I/O	SH data bus
105	VccO	–	I/O power supply (3.3V)	150	D09	I/O	SH data bus
106	PROGRAM	I	Pcif (Xilinx) configuration program signal	151	D08	I/O	SH data bus
107	PINI	I/O	PCIF (Xilinx) configuration initial signal	152	IRQOUT	–	Not used
108	D07	I/O	SH data bus	153	D00	I/O	SH data bus
109	A01	I	SH address bus	154	STATUS	O	Status LED
110	A00	I	SH address bus	155	CCLK	I	Configuration CLK (40 MHz)
111	D31	I/O	SH data bus	156	VccO	–	I/O power supply (3.3V)
112	D30	I/O	SH data bus	157	N.C.	–	Not used
113	D29	I/O	SH data bus	158	GND	–	Ground
114	D28	I/O	SH data bus	159	N.C.	–	Not used
115	D06	I/O	SH data bus	160	CS6	I	SH chip select 6
116	GND	–	Ground	161	CS6	I	SH chip select 6
117	VccO	–	I/O power supply (3.3V)	162	RD	I	SH read
118	Vccint	–	Core power supply (2.5V)	163	BS	I	SH bus start
119	D05	I/O	SH data bus	164	WAIT	O	WAIT output
120	D27	I/O	SH data bus	165	IRQ4	O	Interruption output
121	D26	I/O	SH data bus	166	N.C.	–	Not used
122	D25	I/O	SH data bus	167	SWAIT	I	WAIT input from Slalom
123	D24	I/O	SH data bus	168	KAWA_D7	–	Not used
124	GND	–	Ground	169	GND	–	Ground
125	D23	I/O	SH data bus	170	VccO	–	I/O power supply (3.3V)
126	D04	I/O	SH data bus	171	Vccint	–	Core power supply (2.5V)
127	D22	I/O	SH data bus	172	KAWA_D6	–	Not used
128	Vccint	–	Core power supply (2.5V)	173	KAWA_D5	–	Not used
129	D21	I/O	SH data bus	174	KAWA_D4	–	Not used
130	VccO	–	I/O power supply (3.3V)	175	KAWA_D3	–	Not used
131	GND	–	Ground	176	KAWA_D2	–	Not used
132	D20	I/O	SH data bus	177	GND	–	Ground
133	D19	I/O	SH data bus	178	KAWA_D1	–	Not used
134	D18	I/O	SH data bus	179	KAWA_D0	–	Not used
135	D03	I/O	SH data bus	180	KAWA_DACK	–	Not used

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	KAWA_DREQ	–	Not used	195	STOP	I/O	PCI stop
182	CLK27FPGA	I	27MHz CLK input	196	Vccint	–	Core power supply (2.5V)
183	GND	–	Ground	197	VccO	–	I/O power supply (3.3V)
184	VccO	–	I/O power supply (3.3V)	198	GND	–	Ground
185	CLK	I	PCI clock (33 MHz)	199	LOCK	I/O	PCI lock
186	Vccint	–	Core power supply (2.5V)	200	PERR	I/O	PCI parity error
187	PIRA	I	PCI interruption	201	SDON	I/O	PCI snoop completion
188	PIRB	I	PCI interruption	202	SBO	I/O	PCI snoop back off
189	PIRC	I	PCI interruption	203	SERR	I/O	PCI system error
190	GND	–	Ground	204	AD31	I/O	PCI address/data
191	PIRD	I	PCI interruption	205	AD30	I/O	PCI address/data
192	GNT	I/O	PCI ground	206	AD29	I/O	PCI address/data
193	REQ	I/O	PCI request	207	N.C.	–	Not used
194	PME	I	PCI power management	208	VccO	–	I/O power supply (3.3V)

■ XC2S100-5PQ208C (DECB ASSY : IC1311)

• XILINX FPGA

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GNDD	–	Ground	46	AD06	I/O	PCI address/data
2	RESERVE	–	Resereved	47	AD05	I/O	PCI address/data
3	AD28	I/O	PCI address/data	48	AD04	I/O	PCI address/data
4	AD27	I/O	PCI address/data	49	AD03	I/O	PCI address/data
5	AD26	I/O	PCI address/data	50	M1	I	Configuration mode switch fixed to H
6	AD25	I/O	PCI address/data	51	GNDD	–	Ground
7	AD24	I/O	PCI address/data	52	M0	I	Configuration mode switch fixed to L
8	CBE3	I/O	PCI bus command / byte enable	53	V+3M	–	I/O power supply (+3.3V)
9	IDSE	I	PCI initialization device select	54	M2	I	Configuration mode switch fixed to H
10	AD23	I/O	PCI address/data	55	N.C.	–	Not used
11	GNDD	–	Ground	56	N.C.	–	Not used
12	V+3M	–	I/O power supply (+3.3V)	57	AD02	I/O	PCI address/data
13	V+2X	–	Core power supply (+2.5V)	58	AD01	I/O	PCI address/data
14	AD22	I/O	PCI address/data	59	AD00	I/O	PCI address/data
15	AD21	I/O	PCI address/data	60	RESERVE	–	Resereved
16	AD20	I/O	PCI address/data	61	RESERVE	–	Resereved
17	AD19	I/O	PCI address/data	62	RESERVE	–	Resereved
18	AD18	I/O	PCI address/data	63	RESERVE	–	Resereved
19	GNDD	–	Ground	64	GNDD	–	Ground
20	AD17	I/O	PCI address/data	65	V+3M	–	I/O power supply (+3.3V)
21	AD16	I/O	PCI address/data	66	V+2X	–	Core power supply (+2.5V)
22	CBE3	I/O	PCI bus command / byte enable	67	RESERVE	–	Resereved
23	FRM	I/O	PCI frame	68	RESERVE	–	Resereved
24	IRDY	I/O	PCI initiator ready	69	RESERVE	–	Resereved
25	GNDD	–	Ground	70	RESERVE	–	Resereved
26	V+3M	–	I/O power supply (+3.3V)	71	RESERVE	–	Resereved
27	TRDY	I/O	PCI target ready	72	GNDD	–	Ground
28	V+2X	–	Core power supply (+2.5V)	73	RESERVE	–	Resereved
29	DEV	I/O	PCI device select	74	RESERVE	–	Resereved
30	PAR	I/O	PCI parity	75	RESERVE	–	Resereved
31	CBE1	I/O	PCI bus command / byte enable	76	V+2X	–	Core power supply (+2.5V)
32	GNDD	–	Ground	77	I.GCK1	–	Not used
33	AD15	I/O	PCI address/data	78	V+3M	–	I/O power supply (+3.3V)
34	AD14	I/O	PCI address/data	79	GNDD	–	Ground
35	AD13	I/O	PCI address/data	80	CLK40P	I	40MHz clock input (1)
36	AD12	I/O	PCI address/data	81	RESERVE	–	Resereved
37	AD11	I/O	PCI address/data	82	RESERVE	–	Resereved
38	V+2X	–	Core power supply (+2.5V)	83	DRQ1	0	DMA REQ for SH
39	V+3M	–	I/O power supply (+3.3V)	84	DAC1	I	DMA ACK for SH
40	GNDD	–	Ground	85	GNDD	–	Ground
41	AD10	I/O	PCI address/data	86	AD15	I/O	PCI address/data
42	AD09	I/O	PCI address/data	87	AD14	I/O	PCI address/data
43	AD08	I/O	PCI address/data	88	AD13	I/O	PCI address/data
44	CBE0	I/O	PCI bus command / byte enable	89	AD12	I/O	PCI address/data
45	AD07	I/O	PCI address/data	90	AD11	I/O	PCI address/data

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	V+2X	–	Core power supply (+2.5V)	136	D17	I/O	SH data bus
92	V+3M	–	I/O power supply (+3.3V)	137	GNDD	–	Ground
93	GNDD	–	Ground	138	D16	I/O	SH data bus
94	AD10	I/O	PCI address/data	139	D15	I/O	SH data bus
95	AD09	I/O	PCI address/data	140	D14	I/O	SH data bus
96	AD08	I/O	PCI address/data	141	D13	I/O	SH data bus
97	AD07	I/O	PCI address/data	142	D02	I/O	SH data bus
98	AD06	I/O	PCI address/data	143	V+2X	–	Core power supply (+2.5V)
99	AD05	I/O	PCI address/data	144	V+3M	–	I/O power supply (+3.3V)
100	AD04	I/O	PCI address/data	145	GNDD	–	Ground
101	AD03	I/O	PCI address/data	146	D01	I/O	SH data bus
102	AD02	I/O	PCI address/data	147	D12	I/O	SH data bus
103	GNDD	–	Ground	148	D11	I/O	SH data bus
104	DONE	O	PCIF (Xilinx) configuration termination signal	149	D10	I/O	SH data bus
105	V+3M	–	I/O power supply (+3.3V)	150	D09	I/O	SH data bus
106	SYSRST	I	Reset input	151	D08	I/O	SH data bus
107	PTE2	I/O	PCIF (Xilinx) configuration initial signal	152	D00 (IRQOUT)	–	Not used
108	D07	I/O	SH data bus	153	D00	I/O	SH data bus
109	A01	I	SH address bus	154	RESERVE (STATUS)	O	Status LED
110	A00	I	SH address bus	155	CLK40P	I	40MHz clock input (2)
111	D31	I/O	SH data bus	156	V+3M	–	I/O power supply (+3.3V)
112	D30	I/O	SH data bus	157	RESERVE	–	Resereved
113	D29	I/O	SH data bus	158	GNDD	–	Ground
114	D28	I/O	SH data bus	159	RESERVE	–	Resereved
115	D06	I/O	SH data bus	160	CS6	I	SH chip select 6
116	GNDD	–	Ground	161	WE0	I	Write enable 0 Connect to CS6
117	V+3M	–	I/O power supply (+3.3V)	162	RD	I	SH read
118	V+2X	–	Core power supply (+2.5V)	163	BS	I	SH bus start
119	D05	I/O	SH data bus	164	WAIT	O	WAIT output
120	D27	I/O	SH data bus	165	IRQ4	O	Interruption output
121	D26	I/O	SH data bus	166	RESERVE	–	Resereved
122	D25	I/O	SH data bus	167	BWAIT	I	WAIT input from AV-1
123	D24	I/O	SH data bus	168	BD7	–	MPEG bit stream output
124	GNDD	–	Ground	169	GNDD	–	Ground
125	D23	I/O	SH data bus	170	V+3M	–	I/O power supply (+3.3V)
126	D04	I/O	SH data bus	171	V+2X	–	Core power supply (+2.5V)
127	D22	I/O	SH data bus	172	BD6	–	MPEG bit stream output
128	V+2X	–	Core power supply (+2.5V)	173	BD5	–	MPEG bit stream output
129	D21	I/O	SH data bus	174	BD4	–	MPEG bit stream output
130	V+3M	–	I/O power supply (+3.3V)	175	BD3	–	MPEG bit stream output
131	GNDD	–	Ground	176	BD2	–	MPEG bit stream output
132	D20	I/O	SH data bus	177	GNDD	–	Ground
133	D19	I/O	SH data bus	178	BD1	–	MPEG bit stream output
134	D18	I/O	SH data bus	179	BD0	–	MPEG bit stream output
135	D03	I/O	SH data bus	180	BDACK	–	MPEG bit stream acknowledge

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	BDREQ	–	MPEG bit stream request	195	STOP	I/O	PCI stop
182	CLK27P	I	40MHz clock input	196	Vccint	–	Core power supply (2.5V)
183	GNDD	–	Ground	197	VccO	–	I/O power supply (3.3V)
184	V+3M	–	I/O power supply (+3.3V)	198	GNDD	–	Ground
185	CLK	I	PCI clock (33 MHz)	199	LOCK	I/O	PCI lock
186	V+2X	–	Core power supply (+2.5V)	200	PERR	I/O	PCI parity error
187	PIRA	I	PCI interruption	201	SDON	I/O	PCI snoop completion
188	PIRB	I	PCI interruption	202	SBO	I/O	PCI snoop back off
189	PIRC	I	PCI interruption	203	SERR	I/O	PCI system error
190	GNDD	–	Ground	204	AD31	I/O	PCI address/data
191	PIRD	I	PCI interruption	205	AD30	I/O	PCI address/data
192	GNT	I/O	PCI ground	206	AD29	I/O	PCI address/data
193	REQ	I/O	PCI request	207	RESERVE	–	Reserved
194	PME	I	PCI power management	208	V+3M	–	I/O power supply (+3.3V)

■ HD6417709AF100B (DECB ASSY : IC1211)

• MPU IC (SH-3)

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	MD1	I	CLK mode setting (H)	46	D5	I/O	Data bus
2	MD2	I	CLK mode setting (H)	47	VccQ	–	Core power supply (+1.8V)
3	Vcc-RTC	–	Power supply for RTC (+1.8V)	48	D4	I/O	Data bus
4	XTAL2	0	RTC output (32.768 KHz)	49	D3	I/O	Data bus
5	EXTAL2	I	RTC input (32.768 KHz)	50	D2	I/O	Data bus
6	Vss-RTC	–	Ground	51	D1	I/O	Data bus
7	NMI	I	NMI interruption (Not used)	52	D0	I/O	Data bus
8	IREQ0	I	AV-1 interruption (active L)	53	A0	O	Address bus
9	IREQ1	I	AV-1 interruption (active L)	54	A1	O	Address bus
10	IREQ2	I	Not used	55	A2	O	Address bus
11	IREQ3	I	Not used	56	A3	O	Address bus
12	IREQ4	I	Pcif (Xilinx) interruption (active L)	57	VssQ	–	Ground
13	D31	I/O	Data bus	58	A4	O	Address bus
14	D30	I/O	Data bus	59	VccQ	–	Core power supply (+1.8V)
15	D29	I/O	Data bus	60	A5	O	Address bus
16	D28	I/O	Data bus	61	A6	O	Address bus
17	D27	I/O	Data bus	62	A7	O	Address bus
18	D26	I/O	Data bus	63	A8	O	Address bus
19	VssQ	–	Ground	64	A9	O	Address bus
20	D25	I/O	Data bus	65	A10	O	Address bus
21	VccQ	–	Core power supply (+1.8V)	66	A11	O	Address bus
22	D24	I/O	Data bus	67	A12	O	Address bus
23	D23	I/O	Data bus	68	A13	O	Address bus
24	D22	I/O	Data bus	69	VssQ	–	Ground
25	D21	I/O	Data bus	70	A14	O	Address bus
26	D20	I/O	Data bus	71	VccQ	–	Core power supply (+1.8V)
27	Vss	–	Ground	72	A15	O	Address bus
28	D19	I/O	Data bus	73	A16	O	Address bus
29	Vcc	–	I/O power supply (+3.3V)	74	A17	O	Address bus
30	D18	I/O	Data bus	75	A18	O	Address bus
31	D17	I/O	Data bus	76	A19	O	Address bus
32	D16	I/O	Data bus	77	A20	O	Address bus
33	VssQ	–	Ground	78	A21	O	Address bus
34	D15	I/O	Data bus	79	Vss	–	Ground
35	VccQ	–	Core power supply (+1.8V)	80	A20	O	Address bus
36	D14	I/O	Data bus	81	Vcc	–	I/O power supply (+3.3V)
37	D13	I/O	Data bus	82	A23	O	Address bus
38	D12	I/O	Data bus	83	VssQ	–	Ground
39	D11	I/O	Data bus	84	A24	O	Address bus
40	D10	I/O	Data bus	85	VccQ	–	Core power supply (+1.8V)
41	D9	I/O	Data bus	86	A25	O	Address bus
42	D8	I/O	Data bus	87	BS	O	Bus cycle start
43	D7	I/O	Data bus	88	RD	O	Read strobe
44	D6	I/O	Data bus	89	WE0	O	Write enable
45	VssQ	–	Ground	90	WE1	O	Write enable

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	WE2	O	Write enable	136	XTRST	I	For debugging
92	WE3	O	Write enable	137	TMS	I	For debugging
93	RDWR	O	Read / Write	138	TDI	I	For debugging
94	AUDSYC	O	For debugging	139	TCK	I	For debugging
95	VssQ	–	Ground	140	PINT11	I	Not used
96	CS0	O	Chip select 0	141	PINT10	I	Not used
97	VccQ	–	Core power supply (+1.8V)	142	PINT9	I	Not used
98	CS2	O	Chip select 2	143	PINT8	I	Not used
99	CS3	O	Chip select 3	144	SHMD0	I	CLK mode setting (H)
100	CS4	O	Chip select 4	145	Vcc-PLL1	–	Power supply for PLL (+1.8V)
101	CS5	O	Chip select 5	146	CAP1	–	Capacitor pin for PLL
102	CS6	O	Chip select 6	147	Vss-PLL1	–	Ground
103	AV1RST	O	AV-1 reset	148	Vss-PLL2	–	Ground
104	CE2B	–	Not used	149	CAP2	–	Capacitor pin for PLL
105	CKE	O	CKE for SDRAM	150	Vcc-PLL2	–	Power supply for PLL (+1.8V)
106	RAS3L	O	RAS for SDRAM	151	AUDCK	O	For debugging
107	SDA1	O	Video encoder (IC1711) SDA	152	Vss	–	Ground
108	CASLL	O	CAS for SDRAM	153	Vss	–	Ground
109	VssQ	–	Ground	154	Vcc	–	I/O power supply (+3.3V)
110	XPHRST	O	Reset for 1394PHY	155	XTAL	O	CPU clock
111	VccQ	–	Core power supply (+1.8V)	156	EXTAL	I	CPU clock
112	SQZ	O	Squeeze signal	157	PALNTSC	O	PAL/NTSC selection control signal
113	CASHH	–	Not used	158	PXRST	O	Video encoder (IC1711) reset
114	DACK0	–	Not used	159	FSEL	O	16M clock selection control signal
115	XDAC1	O	Pcif (Xilinx) DMA ACK	160	IRQOUT	O	Interruption output (Not used)
116	SCL1	O	Video encoder (IC1711) SCL	161	VssQ	–	Ground
117	DONE	I	PCIF (Xilinx) configuration termination signal	162	CLK40S	I	System clock input (40MHz)
118	PTE2	O	Pcif (Xilinx) configuration program signal	163	VccQ	–	Core power supply (+1.8V)
119	LTR	O	Letter box signal	164	TXD0	–	Not used
120	TDO	O	For debugging	165	SCK0	–	Not used
121	BACK	O	Not used	166	TXD1	–	Not used
122	BREQ	I	Not used	167	SCK1	–	Not used
123	XWAIT	I	Wait input (Xilinx)	168	TXD2	O	RS232C TXD
124	SYSRST	I	Reset input	169	SCK2	–	Not used
125	N.C.	–	Not used	170	RTS2	O	RS232C RTS
126	N.C.	–	Not used	171	RXD0	–	Not used
127	ASEMD0	I	For debugging	172	RXD1	–	Not used
128	XASKAK	O	For debugging	173	Vss	–	Ground
129	N.C.	–	Not used	174	RXD2	I	RS232C RXD
130	ADATA3	O	For debugging	175	Vcc	–	I/O power supply (+3.3V)
131	ADATA2	O	For debugging	176	CTS2	I	RS232C CTS
132	Vss	–	Ground	177	MCS7	–	Not used
133	ADATA1	O	For debugging	178	MCS6	–	Not used
134	Vcc	–	SH I/O power supply (+3.3V)	179	ADJ/SYNC	O	Control signal of asynchronous / external synchronous selection
135	ADATA0	O	For debugging	180	INT/EXT	O	Control signal of 27MHz clock internal / external selection

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	VssQ	–	Ground	195	SHMD3	I	Bus width setting of area 0 fixed to L
182	PTD3	O	Status LED	196	SHMD4	I	Bus width setting of area 0 fixed to H
183	VccQ	–	Core power supply (+1.8V)	197	SHMD5	I	Bus width setting of area 0 fixed to L
184	PTD2	O	Status LED	198	Avss	–	Ground
185	P/XI	O	Progressive / interlace	199	XCYNCIN	I	External synchronous flag input
186	CPP2	O	Copy inhibit signal for internal control	200	AN1	–	Not used
187	MCS1	–	Not used	201	AN2	–	Not used
188	CPP1	O	Copy inhibit signal for external output	202	AN3	–	Not used
189	PTD1	O	Status LED	203	AN4	–	Not used
190	PTD0	O	Status LED	204	AN5	–	Not used
191	XDREQ	I	DMA REQ for AV-1	205	Avcc	–	Power supply for analog (+3.3V)
192	XDREQ1	I	DMA REQ for Pcif (Xilinx)	206	AN6	–	Not used
193	SYSRST	I	Reset input	207	AN7	–	Not used
194	CA	I	Chip active (H)	208	Avss	–	Ground

■ M65776AFP (DECB ASSY : IC1513)

• AV-1

● Pin Function

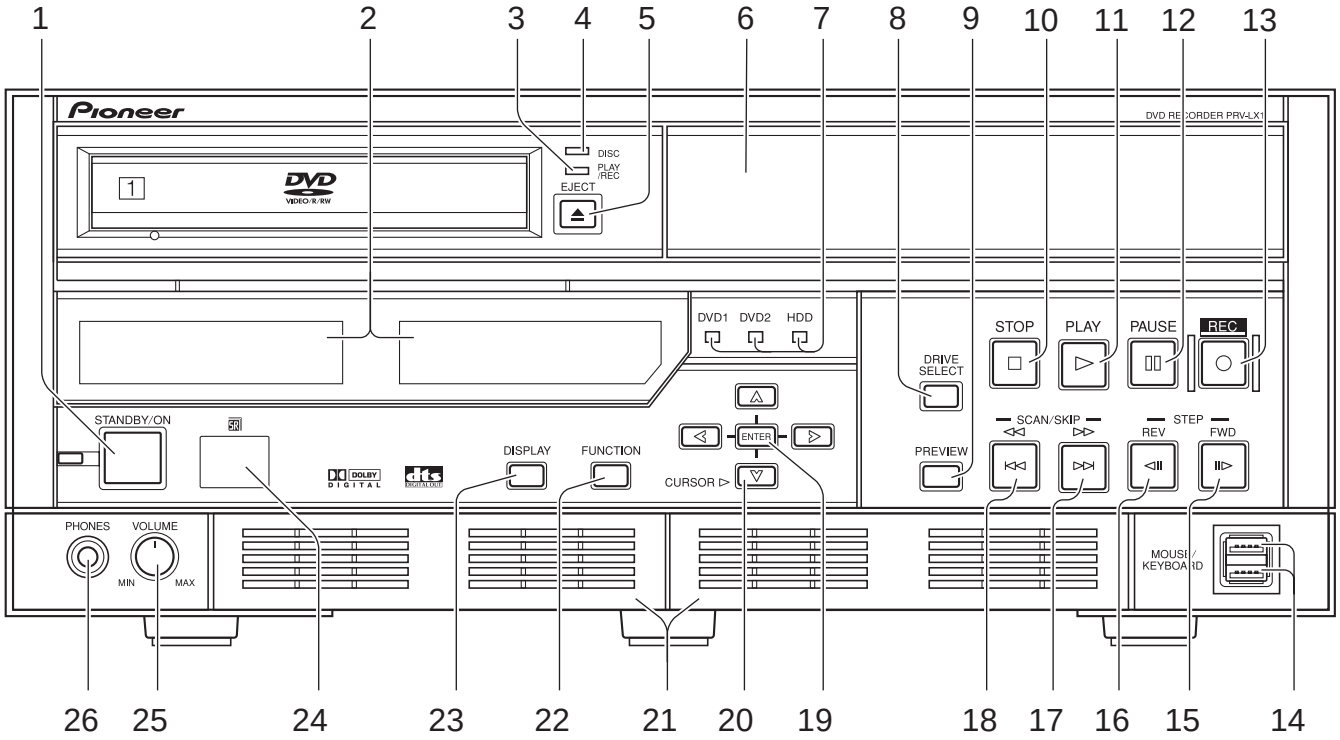
No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GND	–	Ground	46	RDY	O	Data ready
2	BCLK	I	Bit stream clock	47	INT1	O	Interruption request
3	BDEN	I	Not used	48	INT2	O	Interruption request
4	BDREQ	0	Bit stream request	49	INT3	O	Interruption request
5	BSECH	I	Not used	50	GND	–	Ground
6	HD<0>	I/O	Data input/output	51	DREQ	O	DMA request
7	HD<1>	I/O	Data input/output	52	DACK	I	DMA acknowledge
8	HD<2>	I/O	Data input/output	53	MA<3>	O	SDRAM address
9	HD<3>	I/O	Data input/output	54	MA<4>	O	SDRAM address
10	HD<4>	I/O	Data input/output	55	MA<2>	O	SDRAM address
11	HD<5>	I/O	Data input/output	56	VDD18	–	Power supply for internal circuit (+1.8V)
12	VDD18	–	Power supply for internal circuit (+1.8V)	57	VDD33	–	I/O power supply (+3.3V)
13	VDD33	–	I/O power supply (+3.3V)	58	MA<5>	O	SDRAM address
14	HD<6>	I/O	Data input/output	59	MA<1>	O	SDRAM address
15	HD<7>	I/O	Data input/output	60	MA<6>	O	SDRAM address
16	HD<8>	I/O	Data input/output	61	MA<0>	O	SDRAM address
17	HD<9>	I/O	Data input/output	62	MA<7>	O	SDRAM address
18	HD<10>	I/O	Data input/output	63	MA<10>	O	SDRAM address
19	HD<11>	I/O	Data input/output	64	GND	–	Ground
20	GND	–	Ground	65	MA<8>	O	SDRAM address
21	HD<12>	I/O	Data input/output	66	MBA[1]	O	SDRAM bank selection
22	HD<13>	I/O	Data input/output	67	MA<9>	O	SDRAM address
23	HD<14>	I/O	Data input/output	68	MBA[0]	O	SDRAM bank selection
24	HD<15>	I/O	Data input/output	69	MA<11>	O	SDRAM address
25	HA<0>	I	Address input	70	DCS	O	SDRAM chip selection
26	HA<1>	I	Address input	71	VDD18	–	Power supply for internal circuit (+1.8V)
27	VDD18	–	Power supply for internal circuit (+1.8V)	72	VDD33	–	I/O power supply (+3.3V)
28	VDD33	–	I/O power supply (+3.3V)	73	DCS2	O	SDRAM chip selection
29	HA<2>	I	Address input	74	DCS3	O	SDRAM chip selection
30	HA<3>	I	Address input	75	DCS4	O	SDRAM chip selection
31	HA<4>	I	Address input	76	DCS5	O	SDRAM chip selection
32	HA<5>	I	Address input	77	RAS	O	SDRAM-RAS
33	HA<6>	I	Address input	78	CAS	O	SDRAM-CAS
34	HA<7>	I	Address input	79	MCLK	O	SDRAM clock
35	GND	–	Ground	80	DWE	O	SDRAM write enable
36	HA<8>	I	Address input	81	GND	–	Ground
37	HA<9>	I	Address input	82	DQMU	O	SDRAM-DQM upper byte
38	HA<10>	I	Address input	83	DQML	O	SDRAM-DQM lower byte
39	HA<11>	I	Address input	84	MD<7>	I/O	SDRAM data input/output
40	CS	I	Chip select	85	MD<8>	I/O	SDRAM data input/output
41	RE	I	Read enable	86	MD<6>	I/O	SDRAM data input/output
42	VDD18	–	Power supply for internal circuit (+1.8V)	87	MD<9>	I/O	SDRAM data input/output
43	VDD33	–	I/O power supply (+3.3V)	88	VDD18	–	Power supply for internal circuit (+1.8V)
44	WE	I	Write enable	89	VDD33	–	I/O power supply (+3.3V)
45	BHE	I	Byte high enable	90	MD<5>	I/O	SDRAM data input/output

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	MD<10>	I/O	SDRAM data input/output	136	N.C.	–	Not used
92	MD<4>	I/O	SDRAM data input/output	137	N.C.	–	Not used
93	MD<11>	I/O	SDRAM data input/output	138	N.C.	–	Not used
94	MD<3>	I/O	SDRAM data input/output	139	N.C.	–	Not used
95	MD<12>	I/O	SDRAM data input/output	140	N.C.	–	Not used
96	GND	–	Ground	141	N.C.	–	Not used
97	MD<2>	I/O	SDRAM data input/output	142	N.C.	–	Not used
98	MD<13>	I/O	SDRAM data input/output	143	N.C.	–	Not used
99	MD<1>	I/O	SDRAM data input/output	144	N.C.	–	Not used
100	MD<14>	I/O	SDRAM data input/output	145	GND	–	Ground
101	MD<0>	I/O	SDRAM data input/output	146	N.C.	–	Not used
102	MD<15>	I/O	SDRAM data input/output	147	N.C.	–	Not used
103	VDD18	–	Power supply for internal circuit (+1.8V)	148	N.C.	–	Not used
104	VDD33	–	I/O power supply (+3.3V)	149	N.C.	–	Not used
105	CLKO	O	27MHz clcok output	150	N.C.	–	Not used
106	CLKI	I	27MHz clock input	151	N.C.	–	Not used
107	AVDD18	–	Power supply for internal PLL (+1.8V)	152	N.C.	–	Not used
108	AGND18	–	Ground for internal PLL	153	N.C.	–	Not used
109	N.C.	–	Not used	154	N.C.	–	Not used
110	N.C.	–	Not used	155	VDD18	–	Power supply for internal circuit (+1.8V)
111	N.C.	–	Not used	156	VDD33	–	I/O power supply (+3.3V)
112	GND	–	Ground	157	N.C.	–	Not used
113	AVDD33	–	Analog power supply (+3.3V)	158	N.C.	–	Not used
114	DAOUTB	–	Not used (connect to ground)	159	LRCLK	O	Audio channel distinction clock
115	AVRI	I	Reference voltage	160	CDLRCLK	I	Not used
116	PAB	O	Pb current output	161	CDBCK	I	Not used
117	IREF	I	Reference current	162	CDDATA	I	Not used
118	BIAS2	I	Bias voltage for power source	163	CDDIN	I	Not used
119	PAY	O	Y (progressive) current output	164	AO0	O	PCM serial data for DAC
120	BIAS1	I	Bias voltage for power source	165	GND	–	Ground
121	AVDD33	–	Analog power supply (+3.3V)	166	AO1	O	PCM serial data for DAC (Not used)
122	PAR	O	Pr current output	167	AO2	O	PCM serial data for DAC (Not used)
123	AVDD33	–	Analog power supply (+3.3V)	168	AOD	O	PCM serial data for DAC (Not used)
124	AGND33	–	Analog ground	169	AAD	O	Not used
125	GND	–	Ground	170	DOUT0	O	Digital audio (S/PDIF) output
126	N.C.	–	Not used	171	DOUT1	O	S/PDIF output (Not used)
127	N.C.	–	Not used	172	ACLKI	I	Audio clock
128	N.C.	–	Not used	173	DACCLK	O	DAC oversampling operating clock (Not used)
129	N.C.	–	Not used	174	VDD18	–	Power supply for internal circuit (+1.8V)
130	N.C.	–	Not used	175	VDD33	–	I/O power supply (+3.3V)
131	N.C.	–	Not used	176	DOCLK	O	PCM bit clock
132	N.C.	–	Not used	177	PWD	O	Phase comparator output of external sync. signal
133	N.C.	–	Not used	178	CSYNC	I	Composite SYNC signal input
134	VDD18	–	Power supply for internal circuit (+1.8V)	179	OSDKEY	O	Not used
135	VDD33	–	I/O power supply (+3.3V)	180	VSYNC	O	Vertical sync. signal output

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
181	HSYNC	O	Horizontal sync. signal output	195	HMODE<1>	I	Mode setting input (H)
182	PXCLKP	O	54MHz pixel clock	196	TEST[0]	I	Not used (L)
183	PXCLK	O	27MHz pixel clock	197	TEST[1]	I	Not used (L)
184	PD<0>	O	Digital pixel data	198	VDD18	–	Power supply for internal circuit (+1.8V)
185	PD<1>	O	Digital pixel data	199	VDD33	–	I/O power supply (+3.3V)
186	PD<2>	O	Digital pixel data	200	TEST[2]	I	Not used (L)
187	GND	–	Ground	201	BD<0>	I	Bit stream data input
188	PD<3>	O	Digital pixel data	202	BD<1>	I	Bit stream data input
189	PD<4>	O	Digital pixel data	203	BD<2>	I	Bit stream data input
190	PD<5>	O	Digital pixel data	204	BD<3>	I	Bit stream data input
191	PD<6>	O	Digital pixel data	205	BD<4>	I	Bit stream data input
192	PD<7>	O	Digital pixel data	206	BD<5>	I	Bit stream data input
193	RESET	I	SH-3 AV1RST	207	BD<6>	I	Bit stream data input
194	HMODE<0>	I	Mode setting input (L)	208	BD<7>	I	Bit stream data input

8. PANEL FACILITIES

- DVD RECODER [PRV-LX1]
- Front Panel Facilities

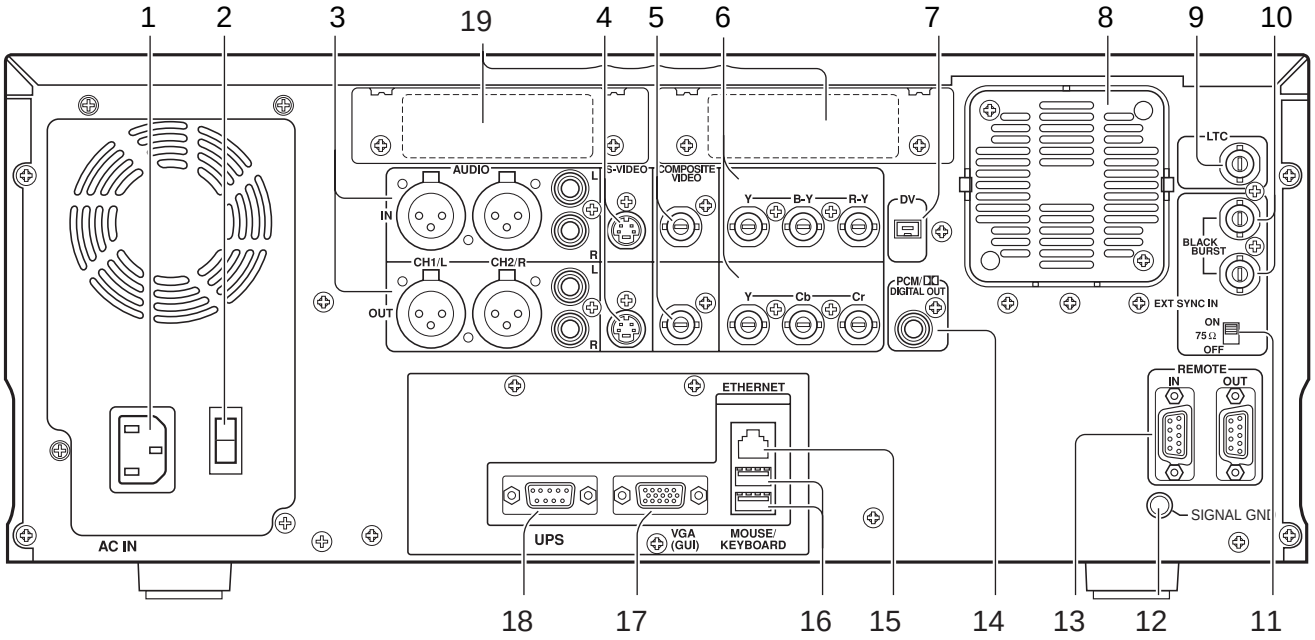


No.	Name	Function
1	STANDBY/ON button	When the unit is in the standby condition, pressing this button causes the power to come on; the power indicator (to the left of the button) changes from orange to green. The main display section indicates system startup. After system startup is completed, the unit enters “idling condition,” and as the unit’s display changes to show the current time, the STOP button lights. When the unit is in the standby condition, if this button is pressed while holding the STOP button depressed, the Function Menu’s setting values will be reset to their factory defaults, and the power will then turn ON. If the button is held depressed for one second or more when the unit is in the idling condition, the unit will perform system shutdown, followed by return to the standby mode (the power indicator will change from green to orange). In the event operation becomes unstable and manual forced shutdown is required, hold the button depressed for four seconds or more.
2	Display sections	
3	PLAY/ REC indicator	Lights to indicate operating state of DVD1 and DVD2 drives. Appears green during PLAY mode, and orange during REC mode.
4	DISC indicator	Located to the right side of DVD1 and DVD2, these indicators light (orange) to indicate that a disc is loaded.
5	EJECT button (⏏)	Press to open/close the disc tray. The DISC indicator flashes from the time the button is pressed until the disc tray closes fully.
6	Drive 2 cosmetic panel	This space is provided to allow the addition of a second DVD drive. When an additional drive is added here, it is considered “DVD2.” * For further information regarding expansion drives, consult your dealer.
7	DVD1, DVD2, HDD (Hard disk Drive)	These indicators light to show which drive has been selected with the DRIVE SELECT button (the indicator for the selected drive lights green).
8	DRIVE SELECT button	Use to select the playback source and destination drive for recording. When only 1 drive is loaded, pressing the button causes the drive selection to change alternately between HDD (Hard disk Drive) =DVD1; when two drives are loaded, the selection changes in the order HDD (Hard disk Drive) =DVD1=DVD2 =DVD1&2. When a drive is selected, the corresponding indicator lights (green). When DVD1&2 is selected, DVD1 is designated as the playback source.

No.	Name	Function
9	**PREVIEW button**	When this button is pressed with the unit in the idling condition, a preview image/sound of the selected input (following encode and decode processing) is supplied to all output connectors except DV; when the button is pressed again, the unit returns to idling condition.
10	**STOP button (■)**	Functions to stop recording or playback. Until all internal operations are completed, the indicator flashes (white), and when fully completed, the unit returns to the idling condition and the indicator lights (white). Also, pressing the STOP button while holding the CURSOR (bottom pointing arrow) button depressed functions to switch between progressive encoding ON/OFF. **(∗1)**
11	**PLAY button (►)**	When this button is pressed, playback begins from selected source (DVD drive or HDD), and the indicator lights (white). When HDD is designated as the recording destination and time shift playback has been set, this button responds even during recording, and initiates playback from the recording start.
12	**PAUSE button (II)**	When pressed, recording or playback is temporarily interrupted and the indicator lights (white). During recording, allows automatic setting of chapters. To resume recording from the recording pause mode, press the REC button.
13	**REC button (●)**	When pressed, recording begins to the selected recording destination (drive or project), and the indicator lights (white).
14	**MOUSE/KEYBOARD connectors**	Allows connection of a USB mouse and keyboard for control of the unit. **(∗2)**
15	**STEP FWD button (II►)**	During normal playback, press for frame advance. Hold depressed for slow motion playback; during slow mode, press again to increase playback speed.
16	**STEP REV button (◄II)**	During normal playback, press for frame playback in reverse direction. Hold depressed for slow motion playback; during slow mode, press to decrease playback speed. **(∗3)**
17	**SCAN/SKIP FWD button (►► / ►►I)**	During playback, press to move to next title or chapter. Hold depressed to initiate scan mode.
18	**SCAN/SKIP REV button (◄◄ / I◄◄)**	During playback, press to move to previous title or chapter. Hold depressed to initiate scan mode.
19	**ENTER button**	Press to select function menu items and commands, and to input DVD menu items and commands (during DVD playback). During recording, press to insert chapter marks at optional locations.
20	**CURSOR buttons**	Use when selecting function menu items, and for DVD menu control (during DVD playback).
21	**Filter cover (2)**	These are ventilation ports provided to prevent excessive heating of internal parts. During installation and operation, do not allow these ports to become blocked, since malfunctions may result. ∗ Air filters are installed inside these filter covers, and must be removed and replaced at regular intervals. Continuing to use the unit with clogged filters may result in malfunction. Consult the appended instruction sheet "Air Filter Replacement Instructions and Precautions".
22	**FUNCTION button (∗4)**	Press to enable and disable the monitor's on-screen function menu display (default setting: DISABLED). When disabled, the unit returns to idling condition.
23	**DISPLAY button**	Press to turn on-screen display (OSD) ON/OFF (default setting: OFF). This button does not operate when on-screen function display is set to DISABLED.
24	**Remote control sensor (SR)**	Receives signals from the remote control unit. Do not allow this part to be blocked by other objects.
25	**VOLUME knob**	Use to adjust output level to the headphones jack.
26	**PHONES jack**	Use to connect headphones.

∗1 • Connect to progressive-scan TV monitor. Non-progressive monitors will not produce correct playback.
• When progressive is set to ON, no video is output to any output connectors except the component output.
∗2 Functionality is not guaranteed on all possible mouse/keyboards. If unstable operation is experienced, try reconnecting the USB connector. If operation continues to be erratic, consult your Pioneer dealer or one of the service centers listed at the end of this manual.
∗3 Not supported when playback source is DVD.
∗4 This operates the same as the remote control unit's SETUP button. The FUNCTION button operates only in the idling condition.

• Rear Panel Facilities

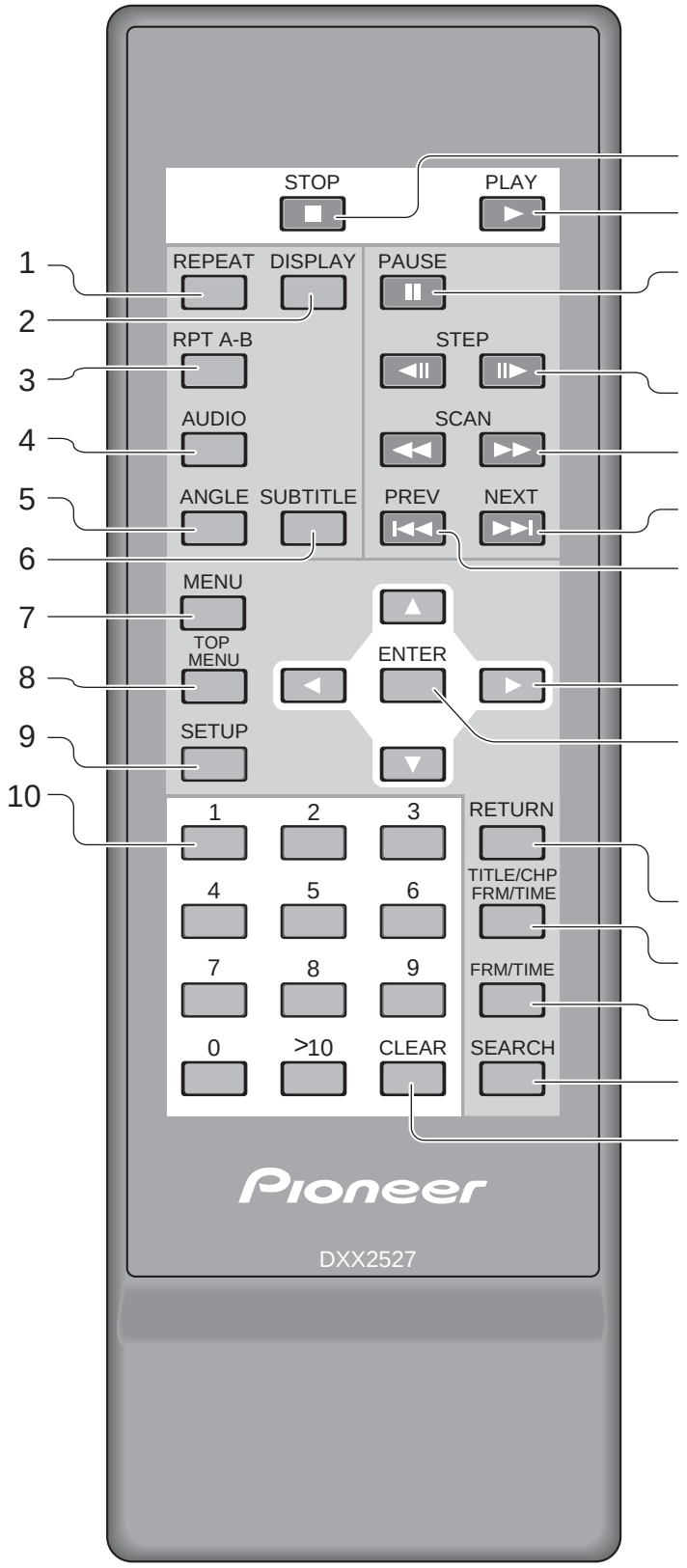


	No. Name	Function
1	AC IN connector	Connect to power cord.
2	Main power switch	When set to ON, the unit enters standby condition and front panel indicator lights orange.
3	AUDIO CH1/L CH2/R IN/OUT connectors	Input/output connectors for analog audio CH1/L CH2/R signals.
4	S-VIDEO IN/OUT connectors	Input/output connectors for S-VIDEO video signal. Output is compatible with S2.
5	COMPOSITE VIDEO IN/OUT connectors	Input/output connectors for analog composite video signals.
6	COMPONENT VIDEO IN/OUT connectors	Input/output connectors for analog component video signals. (*1)
7	DV connector	Connect to DV connector on digital video camera.
8	Fan motor	Fan motor for cooling internal parts.
9	LTC connector (*2)	Connector for obtaining time code from VHS, VTR, etc.
10	EXT SYNC IN and through Output connector	Use for connecting external sync signal, and for pass-through signals.
11	Terminate switch	Use to terminate sync signal. Set to ON when used alone or when connected to a terminating unit.
12	SIGNAL GND terminal	Ground terminal for signals. When using the unit in environments exposed to high levels of electronic noise, malfunctions may occur to mouse and other control devices. In such cases, connect a ground wire between the components to reduce the noise. This is not an electric safety ground.
13	REMOTE IN/OUT connectors	Allows connection to external controller device for external control of the PRV-LX1, as well as connection to VTR for automated recording. The protocol is compatible with SONY format. (*3)
14	PCM/2 DIGITAL OUT connector	Digital audio output connector.
15	ETHERNET connector	Use for network connection.
16	MOUSE/KEYBOARD connectors	USB connectors for connecting mouse and keyboard, allowing external control of the unit. (*4)
17	VGA (GUI) connector	Connect to VGA monitor for expanded operation.
18	UPS connector	Connect when using UPS.
19	Expansion slot	Slot for use with expanded function boards.

∗1 Inputs are compatible with signal levels for both BETA and SMPTE. However, since outputs are based on DVD format, they differ from BETA and SMPTE levels. As a result, outputs should be used only for monitoring.
∗2 LTC is not supported in drop frame mode.
∗3 SONY is a trademark of Sony Corporation. Frame precision is not guaranteed when this unit is used as a playback unit for editing.
∗4 Functionality is not guaranteed for all possible mouse/keyboards. If unstable operation is experienced, try reconnecting the USB connector. If operation continues to be erratic, consult your Pioneer dealer or one of the service centers listed at the end of this manual.

• Remote control unit

This remote control unit cannot be used for recording operations.

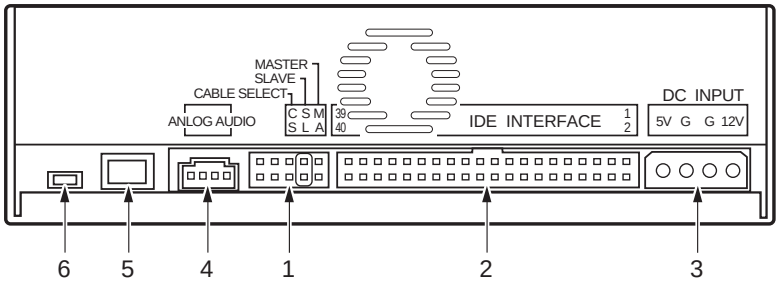


1	REPEAT button
2	DISPLAY button
3	RPT A-B button (repeat playback between two points)
4	AUDIO select button
5	ANGLE button
6	SUBTITLE button
7	MENU button
8	TOP MENU button
9	SETUP menu button ∗1
10	Number buttons (0 – 9, >10)
11	STOP button (■)
12	PLAY button (►)
13	PAUSE button (II)
14	STEP / Slow buttons (◄II , II►)
15	SCAN (fast forward/reverse) buttons (◄◄ , ►►)
16	Chapter skip NEXT button (►►I)
17	Chapter skip PREV button (I◄◄)
18	Cursor buttons (▲ , ► , ▼ , ◄)
19	ENTER button
20	RETURN button
21	Title, chapter, frame, time button (TITLE / CHP / FRM / TIME)
22	Frame/time button (FRM / TIME)
23	SEARCH button
24	CLEAR button

∗1 This key operates the same as the FUNCTION button on the main unit..

• DVD-R/RW WRITER UNIT [PRA-DW11]

Connectors (Rear panel of drive unit)



1 Device configuration jumpers
Placing the jumper on a pair of pins turns the pair ON. Confirm that pin set 2 is set for ON (jumper connected).

2 Host IDE interface
Connect to the PRV-LX1's IDE interface cable.

3 DC INPUT connectors
Connect to the PRV-LX1's power cable.

Connectors 4 , 5 , and 6 are not used with the PRV-LX1.